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JPRS L/10125

18 November 1981

Japan Report

(FOUO 65/81)



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POLITICAL AND SOCIOLOGICAL

DESPITE INDICTMENT, TANAKA STRENGTHENS INFLUENCE

Tokyo THE JAPAN ECONOMIC JOURNAL in English 3 Nov 81 p 8

["Political Scene" column by Teuro Tsutsumi: "Tanaka Builds Up Power Despite Trial"]

[Text]

It is a wonder why former Prime Minister Kakuei Tanaka, a defendant indicted for allegedly receiving ¥500 million in bribes in the Lockheed payoff trial, can still maintain or even strengthen his influence in Japanese politics.

In the trial, lawyers for defendant Tanaka poured out one piece of "evidence" after another to substantiate the claim that he did not receive the money, but "evidence" has been seriously questioned by the prosecutors' rebuttals. Speculation is circulating these days that there is a strong possibility that Tanaka will be proven guilty in the ruling of the Tokyo District Court late next year.

On the other hand, in the expected reshuffle of the Suzuki Cabinet and the LDP leadership at the end of November, LDP Executive Council Chairman Susumu Nikaido, Tanaka's closest associate, is likely to be appointed to the key post of LDP secretary-general. Thus, when confronted with this grim prospect of a "guilty" ruling and the expected Nikaido appointment, everybody just wonders why Tanaka is as powerful as ever and his influence has never lessened.

At present, out of LDP's 421 Dietmen, more than 100 belong to the Tanaka faction. Those who did not belong to any faction before have rushed to the Tanaka camp in the past 12 months. Tanaka himself boasts that "more than 150" Dietmen belong to his faction if "pro-Tanaka men are included." This is an astounding figure when compared with its factional strength of 70-80 men four years ago when Tanaka was arrested on charges of taking bribes.

Why are so many LDP Dietmen rushing into the Tanaka camp? The answer may be found partly in a survey conducted by a weekly magazine which interviewed them. Firstly, the survey said that for most of Tanaka's men, the greatest source of his magnetism is his aggressiveness, which brought him to the highest post of premier without the help of education and inherited wealth in a country where social success is more or less reserved for people with a college degree. Secondly, others said Tanaka is "a man of compassion and very humane and warm-hearted." Two prospective candidates to the premiership within the Tanaka faction, former Finance Minister Noboru Takeshita and former Defense Agency Director-General Ganri Yamashita, are also said to be "men of compassion" equal to Tanaka, their mentor. All this substantiates the reputation that "the Tanaka faction is extremely good in taking care of its members" and proves that there is "a strong bond, similar to the one in a family, between the faction members and Tanaka as the center."

For example, take the case of a junior Dietman, who receives a petition from his constituency for building a bridge or two and paving road. The novice Dietman may be in serious trouble because he does not know the knack of penetrating the bureaucracy. But it will be marvellous if senior members of his faction render a helping hand to talk to the Construction Ministry and meet the expectations of his constituency. Here in this aspect of mutual help among faction members, the

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Tanaka faction is the strongest among all factions of the LDP. And it is no doubt that behind this mutual help lies the fact that there are many "pro-Tanaka officials" within the Ministries of Finance, International Trade & Industry, and Posts and Telecommunications, being built up over the years by Tanaka himself, who are very instrumental in meeting requests from faction members.

Even if this is the case, one just wonders if the situation might not turn against Tanaka if he is found guilty in the Tokyo District Court trial. But in Japan the "three instance system" is adopted and the trial could go on to the Tokyo High Court and the Supreme Court after the ruling is made in the Tokyo District Court. Nobody knows what will happen to the outcome of the trial if the Tanaka camp has decided to bring up an issue that ¥500 million was not a bribe, but a political donation and therefore does not con-

stitute a basis for bribery — a legal contention which could be interpreted in many ways. This is why astute observers say that there will be "no big repercussion to the Tanaka camp even if Tanaka is proven guilty in the first trial."

Thus, the key issue to the forthcoming party leadership reshuffle is whether Prime Minister Zenko Suzuki will appoint Nikaido as LDP secretary-general as expected amid increasing strength of the Tanaka faction within the LDP, and the prospects for a "guilty" ruling in the Lockheed trial. The appointment will be a matter of keen concern to judge whether Prime Minister Suzuki will accept the power of the Tanaka faction or keep a distance from Tanaka in the future.

(Teruo Tsutsumi is a Nihon Keizai deputy political editor.)

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POLITICAL AND SOCIOLOGICAL

KOMOTO'S STRATEGY FOR RISING TO TOP ANALYZED

Tokyo ASAHI EVENING NEWS in English 22 Oct 81 p 2

["Politics and Politicians" column by Michisada Hirose: "Komoto's Strategy for Rising to Top Analyzed"]

[Text]

The strategy of Toshio Komoto, director-general of the Economic Planning Agency, for rising to the top when Prime Minister Zenko Suzuki steps down remains vague. This is partly due to the nature of the man: Komoto takes a cautious approach to everything. But more important reason is that the situation within the ruling Liberal-Democratic Party is unfavorable for him, and he cannot work out an effective strategy.

How does he propose to act in connection with the reshuffle of the Cabinet and the LDP executive lineup, which is to be made after the current Diet session ends?

In the spring of last year, Komoto and his aides had a clear strategy for sweeping into power and were carrying it out on a nationwide scale. The strategy called for recruiting pro-Komoto people into the ruling party. With their votes, Komoto was to win by a large margin in LDP presidential primary elections, in which the party rank and file are eligible to vote.

At that time, the LDP membership increased to 2.5 million, of whom 0.7 to 0.8 million were thought to be Komoto supporters.

The sudden death of Prime Minister Masayoshi Ohira in

June last year and the alliance of the three "main-line conservative" factions—headed by Suzuki and former Prime Ministers Kakuei Tanaka and Takeo Fukuda—which was formed after Ohira's demise destroyed the basic assumption of Komoto's strategy.

With the support of the group led by Yasuhiro Nakasone, director-general of the Administrative Management Agency, the three "main-line" factions have virtually abolished the system of presidential primary elections. (They made a new rule under which primary elections will not be held when three or fewer people run for the presidency. In reality, it is inconceivable for there to be four or more candidates.)

Primaries are supposed to be followed by an election in which only the LDP members of both Houses of the Diet can vote, but it would be extremely difficult for Komoto to win such an election since his faction is the smallest of the five major LDP factions.

The Komoto faction's 43 Diet members compare with the Tanaka faction's 104, the Suzuki faction's 80, the Fukuda faction's 75 and the Nakasone faction's 49.

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The Komoto group was founded by former Prime Minister Takeo Miki. The strategy Komoto is exploring seems to be very different from that of Miki:

1. Miki persisted in being a liberal within the ruling party and criticized the party's "money-politics" make-up. He was always in the minority, but the intraparty confusion which resulted from the resignation of Tanaka as Prime Minister in a scandal over his alleged monetary irregularities led to his gaining the premiership.

Komoto is not counting on there being intraparty confusion. Instead of being a critic of the "main-line" factions, as Miki was, Komoto proposes to get close to them and to persuade them to recognize his competence as a would-be chief executive. When he conferred with Tanaka on a golf course last summer, his group's traditional image of a force critical of money politics lost its luster.

2. Komoto proposes to emphasize skills in economic

management and popularity with economic circles as his strong points. He is certainly more versed in economic affairs than Nakasone, his presumed rival in the post-Suzuki premiership race, and other LDP leaders. Further, business leaders like him because he has shown his competence in anti-recession measures as Minister of International Trade and Industry and chairman of the LDP Policy Board. In other words, he proposes to make up for his inferior position within the ruling party by making use of the support of influential businessmen.

Komoto and his aides feel that Nakasone will be his principal rival in the post-Suzuki contest. They dismiss it as unlikely that the up-and-coming leaders in the Tanaka, Suzuki and Fukuda factions will grow in stature to the extent of making a bid for the premiership in the next two or three years.

Nakasone also hopes to gain the premiership with the support of the three "main-line"

factions since his own faction is not big. Komoto is now viewed favorably by the Fukuda faction, but he has not been able to end the Tanaka group's antipathy. On the other hand, Nakasone has won the favor of Tanaka, but antipathy to him (Nakasone) runs strong within the Fukuda faction.

In connection with the coming Cabinet reshuffle, Komoto will presumably choose to stay on at Suzuki's request and cooperate in the Premier's implementation of policies. If he is to run in the LDP presidential election in December next year, he would do better to step out of the Cabinet and advocate policies a little different from those of Suzuki. But he wants to avoid doing anything that will provoke antipathy within the Suzuki faction, and he will give more importance to this than to other considerations.

The disappearance of an intraparty force critical of the three "main-line" factions has left a gap. It will also have a great negative effect from the viewpoint of maintaining the vitality of the ruling party.

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POLITICAL AND SOCIOLOGICAL

CHIEF CABINET SECRETARY MIYAZAWA'S POSITION EVALUATED

Tokyo MAINICHI DAILY NEWS in English 23 Oct 81 p 1

[Article by Ken Ando, Political News Department, Mainichi Shimbun: "Miyazawa-- Ace or Joker"]

[Text]

Chief Cabinet Secretary Kiichi Miyazawa, the "ace of spades" in Prime Minister Zenko Suzuki's administration, has been coming into the focus of attention with cabinet and Liberal-Democratic Party (LDP) reshuffles expected to be carried out shortly.

Whether or not Suzuki would keep this ace in hand as a trump card in the coming reshuffles, expected in late November, has been watched closely for two reasons:

1) It is generally believed that Prime Minister Suzuki must keep holding the card if he wants to continue to play the game, remaining in office for some years to come; and

2) Miyazawa, as a trump card in the Suzuki cabinet, must get himself discarded as soon as possible if he wants to become a card player by forming his own cabinet.

The coming reshuffles, therefore, will be a fortune-telling of "tomorrow" for both Suzuki and Miyazawa as statesmen.

If Suzuki makes a mistake in reshuffling his cards, particularly the Miyazawa ace

card, Suzuki might fail to be reelected as LDP president in the LDP presidential election scheduled for late next year. (Unless he wins the election, Suzuki will not be able to remain in office as prime minister.)

Miyazawa is an indispensable person for Prime Minister Suzuki as a key figure in the policymaking mechanism of his cabinet. Without Miyazawa, it is said, Suzuki would become helpless in keeping his administration running, as far as policymaking is concerned.

Suzuki is a weathered politician capable of maneuvering his LDP and the Diet. This is not Miyazawa's strong point. In this sense, Suzuki and Miyazawa are in a reciprocal relationship in running the administration.

Suzuki assumed the premiership in July 1980 in a way nobody had expected after the sudden death of former Prime Minister Masayoshi Ohira.

Suzuki's experience in party maneuvering could well be called sufficient as an aspect of the prime minister managing

his power base in the LDP since he had been chairman of the LDP's Executive Council, a key post to coordinate party members, for a total of 10 years. But as far as cabinet experience is concerned, the posts he had were all such obscure ones as minister of posts and telecommunications, health and welfare, and agriculture-fishery.

Meanwhile, in sharp contrast, Miyazawa has been well known not only in Japan but also abroad as an expert in economics and diplomacy since he was director general of the Economic Planning Agency five times and was minister of international trade and industry as well as minister of foreign affairs.

Before he entered the political world Suzuki was an activist for a fishermen's cooperative association after graduating from the Fisheries Institute (present-day Fisheries College).

Miyazawa was an elite bureaucrat in the Finance Ministry after graduating from Tokyo University, the nation's most-coveted elitist school.

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While in the Finance Ministry, Miyazawa served then Finance Minister Hayato Ikeda as his secretary, and accompanied him several times on missions to the United States in postwar days for talks on Japanese economic rehabilitation after the war, preparation for the peace treaty, and Japanese rearmament.

On those occasions Miyazawa came into contact with such persons as Joseph M. Dodge in 1950 and Assistant Secretary of State Walter S. Robertson in 1953, both of whom played important roles in postwar Japan-U.S. relations.

Through these experiences Miyazawa became Ikeda's "brain trust."

As An Author

Dodge told Ikeda that he envied Miyazawa, describing him as a small but glittering diamond. Detailed descriptions of his activities in those days can be found in his book, "Secret Talks between Tokyo and Washington," one of the most important documents of postwar Japanese history.

The two politicians with different backgrounds—Suzuki and Miyazawa—came to know each other in the Kochikai faction that Ikeda formed when he came to power.

Ikeda assigned Suzuki to maneuvering LDP factions and Miyazawa to devising policies.

Around that time (1965) Miyazawa authored another book, "A Dialogue with the Socialist Party—the Way of Thinking of New Rights." In that book he wrote:

"The Kishi cabinet was following a hawkish policy line by advocating the revisions of the Constitution and the Japan-U.S. Security Treaty with an aim at promoting Japan's own self-reliant defense setup."

But Miyazawa raised the banner of "progressive conservatism," or the new right, and declared that he was the champion of the new right.

He said: "The conservatives should be followers of common sense." "we would be able to run this country (Japan) to a certain extent under the current peace Constitution, and I am not for its revision." "what is most necessary for (the achievement of) socialism is not 'what' but 'how'."

He went on further to say:

"(The government) should make efforts to fully reflect the will of the nation in Diet debates and to firmly lay the foundation of confidence that the government is owned by the nation. This is the mission of the Ikeda cabinet."

Miyazawa issued recently a revised edition, 16 years after his book was printed. The revision of the book is apparently aimed at declaring that he is in the line of successors of the conservative administrations handed down from Shigeru Yoshida, Hayato Ikeda, Eisaku Sato, Kakuei Tanaka, Masayoshi Ohira and on to Zenko Suzuki.

After the death of Ikeda, the Kochikai faction founded by Ikeda was taken over by Shigesaburo Maeo. But the faction later experienced infighting among its members because Maeo failed to rise to prevent Prime Minister Sato from being elected LDP president for the fourth consecutive term.

The Kochikai faction was divided into two groups—one attempting to put up Ohira as a candidate for the LDP presidential election and the other supporting Maeo.

In this inner faction dispute, the Ohira group later proved to be the winner with Suzuki having sided with it. In the dispute, Miyazawa, supporting Maeo, was on the loser's side.

Because of this confrontation, Ohira and Miyazawa, both having served Ikeda as secretaries, became at odds. This eventually had far-reaching effects on the selection of Ohira's successor after his death.

Masayoshi Ito, former foreign minister, and Rokusuke Tanaka, minister of international trade and industry, both close aides to Ohira, were vehemently opposed to the appointment of Miyazawa as Ohira's successor.

Because of their strong opposition, coupled with the support from other faction leaders like ex-Prime Ministers Tanaka and Fukuda, Suzuki was selected to succeed Ohira as LDP president.

But through the experience of this political scuffle, Miyazawa emerged as a possible future candidate for prime minister along with such leading figures as Yasuhiro Nakasone and Toshio Komoto.

Miyazawa and Suzuki are now in the same boat although they were political enemies in the struggle of the Kochikai faction after Ohira's death. They came close to each other for an apolitical reason.

Because a son of Suzuki and a niece of Miyazawa were married last year, the father and the uncle became relatives automatically.

Suzuki must have been pleased very much with the marriage as it had provided him with a golden opportunity to establish a connection for his family, having a poor background, with an elitist family like Miyazawa's.

Born in Tokyo in 1919, Miyazawa came from a rich family in Hiroshima Prefecture. His father, Yutaka Miyazawa, was a member of the House of Representatives, serving as railway vice minister in prewar days.

His grandfather on his mother's side is Heikichi

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Ogawa who was a well-known politician in prewar days. Ogawa served as railway minister. Heiji Ogawa, his uncle on his mother's side, was once home affairs minister and is now chairman of the Kochikai faction, lending a supporting hand to Suzuki and Miyazawa. A younger brother of Heiji Ogawa is Heishiro Ogawa who was the first Japanese ambassador to China after Japan and China restored diplomatic relations in 1972.

The brothers of Miyazawa himself are holding important positions. Hiroshi Miyazawa is governor of Hiroshima Prefecture and is expected to run for the House of Councillors in the next election. Yasushi Miyazawa is ambassador to Algeria, and was once director general of the European and Oceanian affairs bureau of the Foreign Ministry.

These examples show how noble the Miyazawa family is.

It is too early to tell whether or not Miyazawa would be able to become prime minister. But it is safe to say that he must learn the business of dealing with party affairs and organize more followers capable of

raising political funds from the business world, if he really wants to assume power.

A race for the next prime minister has already been getting under way with Rokusuke Tanaka, who has been claiming that he is a successor to Ohira, forming a group supporting him within the Kochikai faction. Political observers call the Miyazawa-Tanaka competition a Ichi (1)-Roku (6) - (Kiichi-Rokusuke) - war.

Therefore, it seems to be advisable for Miyazawa to seek such a post as chairman of the Policy Affairs Research Council, one of the three top executive posts in the LDP, in order to establish a power base in the party.

But for Prime Minister Suzuki, Miyazawa is indispensable, and there seems to be nobody available in the party to replace Miyazawa as chief cabinet secretary.

Whether or not Suzuki would let Miyazawa go is the point meriting consideration in the future course of both the Suzuki administration and Miyazawa as a possible candidate for the prime minister.

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JSP FACES MORE AFFLUENT SOCIETY, PUBLISHES REVISED MANIFESTO

Tokyo THE DAILY YOMIURI in English 24 Oct 81 p 2

[Editorial: "'Real' Road to Socialism"]

[Text]

The Socialist Party (JSP) is reviewing its position in present-day Japanese society. Realization has come that Marxist-Leninist dogma has no appeal to today's increasingly affluent working class.

In this new mood of realism, a JSP subcommittee has drafted amendments to the party's 15-year old manifesto, "Road to Socialism in Japan," which virtually represented the party's platform.

The draft amendments are based on an interim report which the Center for Socialist Theory submitted to the JSP's 45th national convention in December last year. The pros and cons of revising the manifesto were thoroughly debated both at that convention and at meetings of the party's lower chapters.

Various anachronisms were identified. For example, the Marxist-Leninist argument that socialism is inevitable presupposed the absolute pauperism of the working class.

Coping With Changes

Casting aside such dogma, the new review adopts a realistic line in giving the draft the subtitle of "View of the Domestic and International Situation in the 1980s."

The review recognizes that the working class today consists of blue collar and white collar workers, as well as workers in the service industries. It takes into account that the aims and aspirations of the new working class are not what they might have been 15 years ago.

In fact, the review takes note of Japan's strong economic potential and admits that there is no accepted ideal model for socialism to follow.

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This contrasts with the manifesto approved by the 27th national convention in 1966 which said that capitalism was dead and must give way to socialism, preferably a Soviet-type socialism.

History has since shown that socialism is not the path to peace, for the socialist countries are even now squabbling among themselves.

Which Way Will The JSP Go?

The JSP's Central Executive Committee is expected to approve the draft amendments to its manifesto and submit the revision to its national convention next year.

Party members are questioning whether the revisions are only a medium-range guideline or a replacement for the old manifesto.

Left-wingers insist on keeping the old manifesto, while right-wingers say it should be scrapped or drastically modified as long as it is out of date.

People will have to guess what the party's intentions are. The new draft avoids stating whether the amendments are a new guideline to replace the old manifesto. Such an ambiguous attitude will not profit the JSP.

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NAKASONE TROUBLED OVER ESTABLISHMENT OF 'POLICY GROUP'

Tokyo THE DAILY YOMIURI in English 23 Oct 81 p 2

["Political Beat" column by Raisuke Honda: "Nakasone's Troubles"]

[Text]

Administrative Management Agency Director-General Yasuhiro Nakasone, who hopes to succeed Prime Minister Suzuki, is deeply troubled over the establishment of a "policy study" group by his onetime friend and faction member Finance Minister Michio Watanabe.

Watanabe formerly belonged to the faction led by Nakasone.

Nakasone and Watanabe were at odds with each other during the 40-day strife within the Liberal-Democratic Party (LDP) under the Ohira administration in 1979.

In the power struggle, the Nakasone faction sided with two antileadership factions led by former premiers Takeo Fukuda and Takeo Miki respectively. This LDP bloc demanded that the then prime minister Ohira step down to take the responsibility for an LDP setback in general elections earlier in the same year.

However, Watanabe and a few other members of the Nakasone faction refused to participate in the attack on Ohira. He was ousted from faction membership for "misleading" the faction members.

Since then, Watanabe has remained unaffiliated with any faction, while keeping good relations with Premier Suzuki as his finance minister.

Earlier this month, he founded a policy study group together with about 30 other LDP Dietmen, thus making himself a "next-generation leader" of the LDP, along with Rokusuke Tanaka, the international trade and industry minister, who also set up his own policy study group recently.

Participants in Watanabe's policy study group are mostly from the faction led by Premier Suzuki and the Nakasone faction.

In particular, more than 20 members of the Nakasone faction, including all those who have returned to the Diet four times

or less, are affiliated with the group led by Watanabe.

The younger members of the Nakasone faction reportedly spurned repeated warnings from its senior members against taking part in Watanabe's group.

One of them has said: "We certainly will make all-out efforts to realize a Nakasone government, but what is wrong with us cooperating with Watanabe after that?"

According to close Nakasone aides, he outwardly keeps composed over the behavior of the younger members of his faction, but is inwardly very disturbed.

At the outset of the Suzuki administration, Nakasone eagerly sought the post of finance minister, but it was given to his onetime "subordinate" Watanabe.

Now, many of the Nakasone faction members have been "taken away" by Watanabe, obviously to the disadvantage of Nakasone in seeking the premiership.

No wonder Nakasone feels offended.

Watanabe, for his part, has made a point of maintaining that his group is not a "faction" but a "study group," thus making it difficult for Nakasone to lodge any complaint against him.

Meanwhile, behind-the-scene maneuvers are certain to intensify shortly over the cabinet and LDP executives' reshuffle scheduled for late November.

In the oncoming cabinet reshuffle, Nakasone is expected to agree to remain in his current cabinet post to continue his full-scale cooperation with Premier Suzuki in carrying out the budget-saving administrative reform program.

Since Suzuki will most likely ask Watanabe to stay on as finance minister, Nakasone will continue to worry about his growing political influence.

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ARAFAT'S VISIT CAUSED BIG HEADACHES FOR KIMURA

Tokyo MAINICHI DAILY NEWS in English 28 Oct 81 p 2

["Nagatacho Doings" column by Takehiko Takahashi: "Arafat's Visit Caused Big Headaches for Kimura"]

[Text]

The leading role in PLO Chairman Yasser Arafat's visit to Japan was taken by Toshio Kimura. A close confidant of the late Eisaku Sato, former prime minister, Kimura served as chief cabinet secretary in the Sato administration. He attracted attention when because of personnel considerations, he moved down from chief to deputy cabinet secretary at one time.

Later he served successively as foreign minister and director general of the Economic Planning Agency but foreign relations are the field in which Kimura is most interested at the present time.

The former Sato faction was divided into the Tanaka faction and the Fukuda faction but Kimura did not join either one. He is still unattached to a faction today.

After forming the Parliamentarians' League for Japan-Palestine Friendship, Kimura became its chairman. In December last year, a group from this parliamentarians' league visited Lebanon, Beirut. At that time Kimura called alone on Chairman Arafat, asking Arafat to visit Japan. This was to be in the form of an invitation to Chairman Arafat from the Parliamentarians' League for Japan-Palestine Friendship.

On his part, Chairman Arafat, in visiting Japan, sought formal contact with the Japanese government. Kimura promised a meeting with the prime minister but did not make any further commitment.

This paved the way, however, for Chairman Arafat's visit to Japan. While these talks were going on, procedures were also advancing for Egyptian President Anwar Sadat's visit to Japan. The assassination of President Sadat occurred and Chairman Arafat alone visited Japan.

LDP Opposition

There was considerable opposition within the Liberal-Democratic Party against Chairman Arafat's visit to Japan. After hearing various reports from a certain expert on Middle East problems, this feeling of opposition strengthened. Some of the LDP members urged Kimura to cancel the invitation to Chairman Arafat.

Kimura, however, did not change his policy. For that reason, Kimura's responsibility became greater. One of the problems that arose was that of security. It is said that 17,000 policemen were mobilized to guard Chairman Arafat during the four days that he stayed at the Hotel New Otani.

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Even before that, a big headache for Kimura was that Chairman Arafat and members of his party carried pistols and hand grenades. It is well known that when Chairman Arafat spoke at the United Nations, a pistol was strapped at his side. This could not be permitted in Japan.

When the airplane carrying Chairman Arafat and his party landed at the airport, Kimura boarded the plane alone. The main purpose was to have pistols and other arms temporarily surrendered. At first three pistols were surrendered but when Kimura insisted that "there must be more," they were all presented.

Kimura seems to have been determined at the time that if Arafat rejected this demand, refusal of the group's landing in Japan could not be helped. In this respect, having been a bureaucrat (formerly of the

Ministry of Transport) and also chief cabinet secretary and then foreign minister, he was a politician fully aware of the severity of Japan as a law-abiding nation.

Although Arafat wanted his meeting with Prime Minister Suzuki to be held at the prime minister's Official Residence, Kimura explained that "the prime minister's room in the Diet building is the same as the prime minister's Official Residence. Particularly since the Diet is now in session, the place where the prime minister is carrying on his work is within the Diet."

Kimura seems to have believed that a meeting in the Diet building would help to allay the feelings of those who were critical of Chairman Arafat's visit to Japan. In addition, the Diet building was preferable from the standpoint of security.

Observers seem to believe that the 15-minute conversation between Prime Minister Suzuki and Chairman Arafat in the prime minister's office in the Diet building holds the key to Japan's future policy toward the Middle East. The contents of the talks have not been made clear.

Kimura was greatly relieved that Chairman Arafat did not fly directly from Japan to the Soviet Union. Chairman Arafat returned once to Beirut in his chartered Libyan plane and then, after changing the members of the group, he went to the Soviet Union. This reflects the complexity existing within the PLO.

As chairman of the parliamentarians' league, Kimura says with relief, "everything that should be done has been finished."

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POLITICAL AND SOCIOLOGICAL

POPULAR SUPPORT FOR PRIME MINISTER REPORTED

Tokyo THE JAPAN TIMES in English 29 Oct 81 p 14

["Politics Today--and Tomorrow" column by Minoru Shimizu: "Popular Support for Prime Ministers"]

[Text]

The late Prime Minister Eisaku Sato led all prime ministers in the postwar era in terms of length of office. He held power for seven years and eight months, but was one of the least popular prime ministers.

According to public opinion surveys conducted by the three major nationwide dailies and Kyodo News Service, his popular support ranged between 32 and 24 percent during the second half of his tenure while those who did not support him ranged between a high 46 and 58 percent.

The late prime minister himself was troubled by this low popularity as gauged by opinion polls, and tried gimmicks to raise his standing with the people but without result. Because of this, Sato and his aides were known to openly doubt the accuracy of public opinion survey results.

Major newspapers and news agencies conduct public opinion polls on the popularity of a Cabinet an average of three times a year. All prime ministers and many other politicians tend to utilize these results to their advantage when the results are in their favor but when they are not, the politicians either just ignore them

or criticize them as faulty, charging that the surveys were not properly conducted.

General Trend

As a general trend, any Cabinet enjoys a high degree of popularity for about a year after its inauguration and then gradually loses support. As gauged by Asahi and Yomiuri opinion polls, the Sato Cabinet enjoyed a popular support of 42 percent in December 1964, right after its inauguration. During the next two years, the rate hovered at around 40 percent, then slid to the low 30s and finally dropped to 24 percent in the spring of 1972 shortly before his departure from office.

The Tanaka Cabinet, which marked its start in July 1972, had the highest ever popularity rate of 62 percent in October that year but only six months later, in April 1973, the rate plummeted to only 26 percent. The Miki Cabinet headed by "Clean Miki" enjoyed a popularity of 42 percent in March 1975, a few months after its start, as people held high hopes of the prime minister whose image was the opposite of that of Tanaka, who was associated with corruption. However, because of his weak power base within the

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LDP. Miki was unable to carry out his pledge of stamping out the roots of corruption from the party and his support rate dropped to 28 percent in December that year.

Unpopular Cabinet

The Fukuda Cabinet, as unpopular as the Sato Cabinet, had a low popularity rate of 30 percent in December 1976 just after its inauguration, which slumped to a low of only 20 percent in April 1978.

Likewise, the Ohira Cabinet had a support rate of 31 percent in March 1979, four months after its start, but the rate fell to 21 percent in February 1980. However, the popularity of his Cabinet surged back to 32 percent in May 1980, a month before his sudden death due to a heart attack.

The present Suzuki Cabinet has been enjoying relatively high popularity chiefly because it came into being when the LDP recovered its strength and gained a stable majority in both houses. The rate was 52 percent in July 1980, immediately after its start, dipped a bit to 45 percent in December and then to 40 percent last April, with the latest figure indicating a support rating of 36 percent early this month.

The Asahi Shimbun commented that only a few other cabinets have marked support ratings of 30 percent or higher at a point one year and three months after their inauguration. These were the Kishi Cabinet, 32 percent; the Ikeda Cabinet, 43 percent and the Sato Cabinet, 30 percent. However, since the latest survey showed that a very high 36 percent of people did not support the

Suzuki Cabinet, this Cabinet has the unique characteristic of registering high rates in both the support and non-support categories.

Now, the results of a series of public opinion surveys on the Suzuki Cabinet's popularity announced in early October present a serious problem — conflicting support rates as announced by the Mainichi Shimbun and Kyodo News Service, the latter's carried by a number of dailies subscribing to Kyodo. The results of both surveys were announced on Oct. 5.

The Mainichi survey showed the Cabinet had only a 26 percent support rate while the Tokyo Shimbun, one of Kyodo's subscribers, said the support rate was 46 percent, just about the same as the figure shown by the previous poll of July 1981. Readers who had a chance to look at both papers must have been puzzled by the sharp difference.

Stable Cabinet

The Tokyo Shimbun, in reporting the Kyodo poll results, commented that the Suzuki Cabinet was the most stable Cabinet in recent years, receiving 48 percent, a high degree of support from the public. It went on to identify reasons for the high rate and said that the people highly rated Suzuki's willingness to carry out administrative reform as shown by the presentation of reform-related bills to the Diet. It also said the apparent disarray within the Cabinet as shown by the resignation of Foreign Minister Masayoshi Ito over the Japan-U.S. Joint Statement of May has ceased to be a factor against the Cabinet.

On the other hand, the Maini-

chi commented that the decline it found in the support rate was a result of Suzuki's failure to impress the people with his modus operandi and administrative reform program. That is, the two papers made completely opposing analyses of the situation.

High Support Rate

Results of surveys in the past few years show that the one conducted by Kyodo always registers a high support rate while the Mainichi's is low, with the Asahi and Yomiuri results coming in between. Seldom have their figures tallied.

They disagree because surveys are conducted at slightly different times and with differing sample groups. In the case of the Kyodo-Mainichi disparity, the questions asked were not exactly identical. There may be other reasons and scholars specializing in opinion polls say that a difference of a few percent is unavoidable. However, they point out that a 20 percent difference could not occur unless polling methods of one or both surveyers were faulty.

Conflicting survey results here have long drawn criticism and public opinion polls conducted by Japanese newspapers and news agencies have not been accepted as authoritative, as compared with those done by the highly respected polling agencies such as Gallup. If glaring disparities such as shown in the current Mainichi-Kyodo case continue, the late Prime Minister Sato's non-confidence in local public opinion surveys will come to be shared by many more politicians.

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ECONOMIC

POSTAL SAVINGS POLICY DISPUTE SETTLED

Roundtable Discussion of Issues

Tokyo SHUKAN TOYO KEIZAI in Japanese 19 Sep 81 pp 16-20

[Roundtable discussion with the following participants, in addition to the moderator: A is an economic section reporter; B is on the political desk; C is an economic journalist; and D is a political commentator]

[Excerpts] Politics and Postal Savings Dispute: Agreement Among Kanemaru, Takeshita, Abe Brings Settlement

SHUKAN TOYO KEIZAI (ASIA ECONOMICS WEEKLY) moderator: The Postal Savings Report, which extolled the "unification of interests rates" and denied "autonomous investment of postal funds," has led to a political battle that has split the Liberal Democratic Party (LDP) in two.

The Ministry of Posts and Telecommunications (MPT) faction, faced with a report disadvantageous to their cause, is said to have already gathered petition signatures from the 333 LDP representatives. This group is led by the LDP Communications Committee (chairman: Yoshihide Mori) and they have organized themselves into a Special Committee on Postal Policy Operations (chairman: Shin Kanemaru). Countering them, a league representing the Finance Ministry and the banks which uphold the report have formed a "Free Economy Council (chairman: Noboru Takeshita) which is prepared to fight them head on....

Signatures in Excess of 500

A: Prior to issuance of the report, the MPT supporters were overwhelmingly in the majority and the bank faction was only an insignificant force. But since the report was so cool to the former group, the bank faction feared a backlash so they--Junichiro Koizumi (LDP Financial Policy Committee Chairman) and Ichiro Sato (LDP Monetary Issues Research Committee Chairman)--decided that they needed to launch a countermove with a big name heading, and Noboru Takeshita was chosen.

D: Implicit in the name "Free Economy Council" is the thrust of their cause--hold down bureaucratic pressure and protect the civilian free market economy....

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A: The reasoning of Koizumi et al is that capital funds must flow to minor industries and agriculture by way of the free market. The Free Economy Council is scheduled to hold a general meeting in late September and early October. It is boasting that it will get over 300 signatures.

C: I understand that it claims to have more than 200 signatures already. If we add the 333 that signed the MPT signature drive to this figure, the number easily exceeds 500. Since there are 423 LDP members (upper and lower houses combined), it means that there are more than 100 signatures beyond the full quota.

B: I know of a Diet member who secretly admitted to us that he signed both pledges. (laughter) If we exclude such waverers from consideration, the MPT faction has a closer solidarity. There are some 10 stalwarts such as Moriyoshi Sato, Yuji Nagata and so on. But there are very few real banking group adherents.

D: According to an executive member of the Federation of Bankers Associations of Japan, "there are 1 million employees of banking facilities in Japan. If we count the life insurance group, the number becomes 1.5 million. Compared to the 300,000 postal employees, we are overwhelmingly superior in voting strength.

But compared to the strong political pressure that postal employees wield, with their privately owned post offices forming the axis of their power, the banking faction's pipeline to politicians is far weaker.

Agricultural Cooperatives Assigned To Spearhead the Opposition

A: Banks follow a policy of public mindedness; thus, it is difficult for them to apply political pressure. Mr Teizo Matsuzawa of the Fuji Bank has repeatedly said that "(banks) must be neutral in politics." They are willing to go along if the result is one that the financial agencies can consent to, but unless that guarantee is present, they fear that a tie with politicians might end in political contributions being milked from them.

But there is a feeling that since the situation has come this far, it cannot be helped...so, let us really do it.

C: However, the bank group has an "ultra-C" called Agricultural Cooperatives. The "Viet Cong representatives" (i.e. farm delegates) have a power that cannot be easily overwhelmed by the MPT faction. Besides, farm cooperatives--and not the metropolitan and regional banks--are those most affected by the postal savings offensive.

B: At the time of the establishment of the individual postal pension fund in the 1981 budget, the strongest opposition came from farm cooperatives. The metropolitan bank executives are not very adept at petitioning. Farm cooperatives, on the other hand, have authority and the Diet representatives will work for them. Thus, the banking group's strategy is to use agricultural cooperatives as the front runners in dealing individual blows to the opposition.

D: Farm representatives and MPT representatives have the same electoral base, so the situation will be tense.

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As a matter of fact, farm cooperatives have launched an active telephone campaign with regard to the Diet members. The majority of the representatives--when the entreaty is made that the farmers' savings will flow to the post office--can easily be persuaded to sign.

D: If we include the duplicate signatures, the bank faction may be able to amass 300 signatures.

LDP Trio Will Coordinate

Moderator: The administration must make a decision on the Postal Savings Report before the yearend drafting of the 1982 budget estimate. Is it not true that if the confrontation escalates, the decision will become more difficult?

D: With regard to the "unification of interest rates on savings," the report urges that "a cabinet decision be made as an interim measure." But to change postal interest rates at the same time as a bank deposit--in particular when it involves the lowering of the interest rate--will arouse strong reaction from the MPT faction. A smooth straight road to a cabinet decision is virtually impossible.

B: Prime Minister Suzuki is saying he "would like a public statement on this subject from Finance Minister Watanabe, Minister of Posts and Telecommunications Yamauchi and Chief Cabinet Secretary Miyazawa after full examination," but a resolution cannot be reached by making the cabinet members collide.

A: A resolution can only be realized by coordination at the party level.

B: I think the fact that Takeshita was chosen as chairman of the Free Economy Council is an indicator. Kanemaru, who represents the MPT faction, and Takeshita, the banking group's chosen representative, both belong to the Tanaka group, and furthermore they are related.

D: Takeshita's eldest daughter is married to Kanemaru's eldest son.

B: So, when the heads are Kanemaru and Takeshita, the struggle does not have the flavor of a bloodbath. Immediately after the publication of the Postal Savings Report, Shintaro Abe (Policy Coordinating Committee chairman) said that, "Takeshita is the only one who can counter Kanemaru and at the same time talk to him." "Even if the ministries are in conflict, he will somehow be able to resolve the matter."

Takeshita himself is silent in response to reporters' leading questions, but I think that Takeshita was nominated for the Free Economy Council's chairmanship by Abe.

D: What it boils down to is that there was a plan to effect a conciliation by a trio composed of Abe, representing the Fukuda faction, and Kanemaru and Takeshita, representing the Tanaka faction.

B: The fact that the bank group has amassed over 300 signatures and is attempting to counter the MPT faction can be seen as a way of maintaining intraparty balance. While equalizing the strength of the two factions, Kanemaru and Takeshita carefully modulate--a very typical LDP approach to politics.

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A: At a lecture meeting a while back, Abe said that, "the nice thing about the LDP is that the combined signatures of the MPT faction and the banking group exceed the total number of LDP representatives." (laughter) He means to seek a sensible compromise along this line.

Thus, the aim is not to separate the two camps but to make them balance each other--that is the significance of the signature-gathering competition. The scheme is for the Kanemaru-Takeshita-Abe trio to find the ultimate settlement condition with the above factor in mind. Based on Abe's statement, I have a feeling that the scenario has been worked out already.

Pipeline With the Bank Group, Too

D: The fact that the Tanaka faction's Kanemaru and Takeshita will become coordinators is a plus factor for that faction, which had MPT supporters but weak ties with the bank group.

C: Although banks have contributed political funds to the LDP's Citizens Association [kokumin Kyokai], they have not made contributions to individual politicians. However....

B: On that score, it will be interesting to see what moves Takeshita, who has been a finance minister, will make. He is very gifted in creating campaign contribution pipelines.

Moderator: Notwithstanding all that, if the party-level performance precedes all other factions, what about the positions of Finance Minister Watanabe and Minister of Posts and Telecommunications Yamauchi?

A: In terms of the sequence of events, Chief Cabinet Secretary Miyazaki will call Kanemaru and Takeshita to discuss the final settlement. At this point, if broad based agreement can be reached, talks will proceed with Watanabe and Yamauchi's participation. Miyazaki will select the appropriate moment.

C: Yamauchi is scheduled to step down at the time of the cabinet reorganization slated for November. Watanabe is sure to stay on. The difficult question is how to give due credit to Watanabe, who has been very active in this affair.

B: Of course, before the events in the scenario move forward, there will be one or two shakeups. MPT opposition to unification of interest rates is firm, and Kanemaru, too, is stubborn. So, if the course of the coordination attempt goes wrong, the matter could get sticky. Chief Executive Secretary Nakasone has been concerned that, "although Kanemaru and Takeshita will manage capably, the problem being what it is, the solution will not be easy." I think there is a good chance that the settlement will not be reached until the very end of the budget compilation.

There Will Be No Great Change

Moderator: Incidentally, if the final format is as proposed by the LDP, what will it contain...especially regarding the greatest point of controversy--unification of savings interest rate determination...?

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A: So as not to create a misunderstanding, let me say that the report advocates unification of "interest rate determination procedure" and not "the establishment of a uniform standard for postal savings and bank savings interest rates." Moreover, the concrete method of unification of "interest rate determination procedure" is left in the hands of the government. There are several ways to unify the determination procedure: joining of the Postal Policy Commission, which determines the postal savings interest rate, and the Interest Rate Regulation Commission, which decides on the bank's savings interest rate, or else a reciprocal membership among the commissions. But either alternative is difficult to realize immediately. I think the outcome would be a temporizing solution--a reliance on a cabinet meeting to decide on the direction of the unification.

C: It would indeed be difficult to institute new interest rate determination machinery. In that case, another dispute would arise over the question of who would have the leadership role in the interest rate determination--the Finance Ministry or the Bank of Japan. So, I agree with Mr A that the immediate step would be a mere confirmation of basic policies at the cabinet meeting. Then, the discretionary powers--unlike the current format of rigid interest rate determination at individual committee meetings--would be expanded significantly.

D: But if the savings interest rate must be lowered, the MPT will oppose it totally and cause a fuss again.

C: For the time being, a further interest reduction is unlikely. Moreover, although the bank faction is a stickler on the issue of unification of interest rates, it does not say that it should be realized by any specific date. The idea behind the drive for unification of interest rates is to create a system in which the savings interest rate fluctuates dynamically in keeping with the market trend. In order to do this, unwillingness to lower the interest rate--such as the stand professed by the MPT in the name of protecting the depositors--is a hindrance. The banks' argument is not so rigid.

D: Give plenty of room for discretion in the solution of the unification controversy and ease the tension.... Is that the rationale?

One more thing. What is going to happen to the MPT's strong claim for "autonomous use of postal savings funds," "raising of deposit limit," "expansion of new services [shinki gyomu]," and "expansion into the individual finance sector"? The Postal Savings Report suppressed all the requests made by the MPT.

C: On this point, the MPT is threatening the Ministry of Finance. As you know, the postal savings are all deposited with the Ministry of Finance's Funds Appropriation Section [Shikin Unyobu] and are used as the basic fund for the fiscal policy investment fund [zaisei toyushi]. But as a result of a recent decline in postal savings, the deposits with the Funds Appropriation Section for next year are 1 trillion yen less than this year--or 7.9 trillion yen. This is due to the fact that the Ministry of Finance recognized a commodity very advantageous to the banks--the fixed-term [kijitsu shitei teiki] account--and the postal savings were all eaten up by it.

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The content of the threat, therefore, is that if the Ministry of Finance wishes to secure fiscal policy investment funds, it should recognize the raising of the postal savings deposit limit and the establishment of a silver savings account at a 10-million-yen limit.

D: Autonomous use of the postal savings fund, too, is a negotiable item. Autonomous use is the MPT's long-standing claim, and there is also a rationale that if national bonds can be purchased with postal savings, then the Funds Appropriation Section's public debt can be subrogated.

A: But the Finance Ministry will never recognize autonomous use. It is true that direct purchase of national bonds with postal savings will make for a much more streamlined operation than going through the Funds Appropriations Section. But once that is sanctioned, there is the danger of gradual expansion of the autonomous use category--to include regional bonds, Telephone and Telegraph Corporation bonds and then the money trusts. The Finance Ministry's stand is that it will not sanction national bond purchase, if only to curb such a trend.

C: Then the solution may be to support the interest rate unification in intent by a cabinet decision and on the other hand perhaps to recognize the raising of the deposit limit amount so as not to downgrade the MPT's prestige.

A: There is also the need to save the Postal Savings Report Committee's face by reviewing the incentive pay for postal savings employees and other such moves....

D: Then there will not be much difference from the current situation. When the Postal Savings Report Committee members hear of such a conclusion(?), won't they be furious?

B: Unfortunately, such is the reality of politics.

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Settlement Within LDP

Tokyo NIHON KEIZAI SHIMBUN in Japanese 30 Sep 81 p 1

[Text] The administration/Liberal Democratic Party's adjustment (coordination attempt) regarding the Postal Savings Deliberative Committee's report, which in part was about the unification of savings interest rate determination, was in effect completed the evening of on 29 September. An agreement reached between Chief Cabinet Secretary Miyazaki and LDP Policy Affairs Research Council Chairman Abe contains following main items: 1) In deciding on or changing the savings interest rate of a civilian banking facility, the Ministry of Finance and the Ministry of Posts and Telecommunications will strive for an exchange of ideas and intentions, and will handle the matter while maintaining flexibility and with the emphasis on compromise. 2) Examination of other issues will be continued by the Ministerial Secretariat, the MPT and the Finance Ministry. 3) The issue of autonomous use of the postal savings fund will be shelved for the time being. Following the conclusion of the LDP's internal coordination, the administration will hold a three-way cabinet meeting involving the Finance Ministry, the Ministry of Posts and Telecommunications and the Cabinet Secretariat on 30 September, and after a formal agreement, the chief cabinet secretary will make a report at the 2 October cabinet meeting.

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The conflict resolution plan for handling the Postal Savings Report was compiled by Chief Cabinet Secretary Miyazaki in cooperation with Shin Kanemaru, Special Committee on Postal Policy Operations chairman; and Noboru Takeshita, Free Economy Council chairman. The LDP is scheduled to seek a formal acknowledgment of the conflict resolution plan at the 30 September morning meeting called by Policy Affairs Research Council Chairman Abe. Kanemaru, Takeshita and the representatives of public finance, communications sections and other related organs will all be called to this meeting.

With regard to the focal point of the controversy--the interest rate unification question--in consideration of the position of the MPT, a "revision of postal savings regulations" for the purpose of unification of interest rate determination will be shelved. On the other hand, "flexible handling" relying on the application of regulations currently in force will be emphasized. The Finance Ministry's assertion in favor of a substantive unification decision appears to have been highly regarded. Now, with respect to "the review of fixed rate savings" and the "policy of non-expansion of the postal savings operation" indicated in the Postal Savings Report, "continued investigation" by government agencies has been decided on as a result of strong opposition from the MPT, which declared that these items are crucial to the survival of the postal savings program itself.

As for the question of the autonomous use of postal saving funds, which is expected to be the focal point of conflict between the Finance Ministry and the MPT at the 1982 budget compilation session, no clear direction will be stipulated and the decision will be left to the future budget compilation operation.

If the MPT's requests are suppressed at this stage and there is a conflict of opinion within the government, the opposition is sure to point out cabinet disunity at the emergency session of the Diet. For this reason, it would appear that the "temporary shelving of the issue" is designed to insure that there are no discrepancies between the responses of the MPT and the Finance Ministry at the Diet session.

The current conflict resolution plan is a "vague" statement which left the issue of interest rate unification unclear. (LDP leadership) Basically, however, it adopted more of the Finance Ministry's ideas. For this reason, the format of the settlement--a "cabinet report based on agreement by three cabinet offices"--is an ambiguous one aimed at parrying the MPT and those LDP members who deal with MPT affairs who are dissatisfied.

One of the reasons that the administration and the LDP leadership hastened to temper the postal savings problem is that recently there has been a strengthening of the move to "defer to the civilian financial organ's reports--such as the opinion of the agricultural cooperatives--and there was a cry for "early settlement" from the LDP representatives who were wedged between such civilian organizations and the MPT faction--postal station chiefs and the like.

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Editorial Comment

Tokyo NIHON KEIZAI SHIMBUN in Japanese 30 Sep 81 p 3

[Editorial]

[Text] The confrontation between the Finance Ministry and the Ministry of Posts and Telecommunications over the Postal Savings Report, which had mushroomed into a conflict that divided the LDP administration in two, has ended, at least for the time being, with the current resolution. The focal point of the dispute--unification of interest rate determination procedures--was dealt with in more ambiguous terms than in the original report and has taken on an ambiguous coloring [tamamushi-iro], but we can say that its realization has been furthered. However, the initial thinking by the Cabinet Secretariat and the Finance Ministry, to stand by the report and take it to a cabinet decision and to review Japan's financial system within its framework, has greatly been retrograded. Before the report can take actual shape, more difficulties appear to be in store.

With regard to the content of the settlement, in the end the words "unification of interest rates" as well as "simultaneous determination," and interlocking of savings interest rates, contained in the original report backed by the Finance Ministry--expressions directly tied to actual realization of interest rate unification--were bypassed. But the resolution contains the phrase, "with emphasis on adjustment... and flexibility." Thus, we can say that the Finance Ministry's proposal, though ambiguously stated, has been adopted." The Finance Ministry's interpretation is that "flexibility" can be interpreted to mean that the savings interest rate will be determined following the civilian savings interest rate format." (Finance Ministry leadership) "Adjustment" can be translated substantively to mean "simultaneous determination and categorial interlocking." (same source)

The MPT, meanwhile, sees the resolution as "merely a written account of the currently effective savings interest rate determination procedure." (MPT leadership) Moreover, the "cabinet decision" that the Finance Ministry and the Cabinet Secretariat originally contemplated has been replaced by the phrase "cabinet report" as a result of MPT opposition. As to its significance, "it can be evaluated as a settlement that opened the way for talks between the Finance Ministry and the Ministry of Posts and Telecommunications" (administration leaders), but as to how this will be used in interest rate management is, in fact, largely left to the coordination process between the two ministries.

But it is true that when there is disagreement between the Ministry of Finance and the MPT over the question of changing the savings interest rate in the future, on the strength of the present agreement the Finance Ministry can claim that "the interest rate should be determined in the spirit of adjustment and with flexibility," and consequently its position will be stronger than its current position. In this sense, we can say that we are one step closer to the unification of interest rate determination procedure as sought in the Postal Savings Report.

Although the Postal Savings Report has provided a nominal settlement of the unification of interest rate question, many topics--review of fixed amount savings, inroads

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into new [postal savings] operations such as a comprehensive account [sogo koza] and autonomous use of postal savings funds--are still unresolved; and there is a strong possibility that the conflict between the Finance Ministry and the MPT will flare up and embroil the LDP once again at the time of the yearend budget compilation session.

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SCIENCE AND TECHNOLOGY

U.S.-JAPAN MILITARY TECHNOLOGY COOPERATION EXAMINED

Tokyo SHUKAN ORU TOSHI in Japanese No 457, 4 Sep 81 pp 20-23

[Text] Behind the Scenes of U.S.-Japan Military Technology Cooperation; Specific Discussion of Mutual Technological Assistance

Recently, the government has taken a unified position on the issue of providing military technology as requested by the United States. It says that doing so will not infringe on the "three anti-arms-export principles."

In accordance with this position, Japanese arms makers can export military technology to the United States on a large scale. Right now, the government is making up a list of the items that can be sent to America. There are some sectors, such as the trading companies, which have already begun looking at this list. However, the manufacturing companies have not yet shown much of a reaction.

U.S.-Japan military technology cooperation was conspicuously discussed at the conference between Defense Agency Director General Omura and U.S. Secretary of Defense Weinberger at the end of June. The United States made this proposal suddenly in connection with the demand to increase the military budget, but there was a more dubious reason behind the proposal. Apparently, the United States told Japan to export its most advanced technology in exchange for letting Japan manufacture the BADGE X system (next-period air defense warning control system) domestically.

At any rate, this problem of military technology cooperation did not just arise recently. There was already a DEA (Data Exchange Agreement) for pure research and development between the United States and Japan, in addition to the Japan-U.S. Mutual Defense Assistance Agreement. There have already been more than 100 instances of military technology assistance provided by the U.S. Department of Defense to the Japanese Defense Agency's Technical Research and Development Institute.

These were instances of one-sided assistance from the United States. In the fall of last year, the suggestion was made that Japan should also provide military technology to the United States so it would be a mutual exchange. Defense Agency Equipment Bureau Director Wada and U.S. Defense Department Under Secretary Perry (at that time in charge of research and development and technology) conducted the first round of U.S.-Japan talks concerning military equipment technology.

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This conference was entirely unofficial, but it drew attention as a prelude to cooperative arms development by the United States and Japan. The second round of talks was conducted in Tokyo this spring. This fall, Wada and Under Secretary DeLauer (in charge of research and development and technology) will hold a third round of talks. It is certain that rather specific methods of cooperation will be discussed at this meeting.

United States Gives High Marks to CCD's and Other Electronics Technology

What kind of military technology can Japan provide to the United States? Technological capability, particularly in the military area, is top secret, so it is difficult to compare the United States and Japan. However, many kinds of recent military technology are interchangeable with civilian technology. So we can expect that Japan, which has made great efforts in civilian technology, has many things to offer the United States.

Compared to the United States, Japan has superior technology in fiber optics laser technology necessary for improving the accuracy of missiles, infrared (pursuit) technology, all types of radar technology, some sonar technology, and some VLSI (very large-scale integrated circuit) technology. All of these items are electronics-related.

A U.S. article on lasers last year, which stated that Japanese military laser technology is the most advanced in the world, attracted a lot of attention. The companies which have made the most progress in research and development using light are Nippon Electric, Hitachi, and Fujitsu, the companies which are exerting themselves in the field of optoelectronic communications including optic fibers. Optic communications technology is still in the research stage at Nippon Telegraph and Telephone Public Corporation. But Nippon Electric is already receiving overseas orders for optic communications systems. Application of this optoelectronic technology is very attractive to the United States as well.

In infrared forming and radar, Toshiba has received attention for developing the Tan-SAM (short-range surface-to-air missile) with the world's most advanced lock-on system and phased array radar. Toshiba has recently begun officially taking orders for the Tan-SAM. Many manufacturers' representatives have come to Japan from Europe and America and expressed a desire to use this technology.

In the VLSI field, the large U.S. electrical companies, IBM, Texas Instruments, and Westinghouse, are cooperatively developing the VHSIC (very high speed integrated circuit). With this combined strength, the United States is clearly superior. However, five Japanese companies--Hitachi, Toshiba, Mitsubishi Electric, Nippon Electric, and Fujitsu--have also formed a VLSI research association and have achieved revolutionary results in the technology for printing circuits on silicon wafers. The results obtained by this research association are being put to use in mass production of VLSI's by the various companies.

In some aspects, Japan is ahead of the United States in general-use VLSI's. In fact, trade friction is appearing and complaints are being made that it is not right for industry to cooperate with the government in developing VLSI technology. Of course, this will be sure to have an effect in the coming military technology cooperation.

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The portable SAM (portable short-range missile), for which Toshiba is taking orders, applies the CCD (charge-coupled device) technology which is used in home VTR. It uses a pursuit system which perceives the invading aircraft as an image. The CCD chip is small and easy to use, so it is a central technology for the latest home electrical products. Sony, Matsushita Electrical Industry, Hitachi, Japan Victor, and other leading manufacturers are competing to develop this technology. Japan is ahead in CCD's, so it is very likely that the United States will try to obtain this technology for military use.

Many Japanese electronics manufacturers are involved in the items listed here, including those like Sony, Matsushita, and Japan Victor which have few dealings with the Defense Agency at present. But the United States is clearly interested in Japan's highest level electronics technology regardless of whether the developer is an arms manufacturer or not. An important key to the military technology cooperation lies here.

Is U.S.-Japan Joint Arms Development the Ultimate Goal?

It is not clear what kind of cooperation was requested in the Wada-DeLauer meeting in September. However, this meeting was given official status by the governments of both countries, so rather specific categories of technology were probably discussed. The ultimate goal of this military technology cooperation is joint U.S.-Japan arms development. This must be made clear because it relates to Japan's principles opposing arms export.

Two years ago, the Keidanren's Defense Production Committee announced a plan for joint arms development based on technological assistance from Japan. Specific plans were made for joint development of PGM (precision guided missiles) and cruise missiles. The government was approached and the Defense Agency responded by setting up a regular conference on equipment technology. The sights were set for military technology cooperation in precisely this direction.

The cruise missile, one of the two weapons specified by the Defense Production Committee as examples, is seen by most observers as "an offensive weapon not suitable for Japan's system of defense only." However, the PGM is desired by the Defense Agency as future equipment, and some trading companies are showing strong interest because it is likely to appear as an extension of the military technology cooperation.

With respect to joining arms development, at a meeting between U.S. and Japanese financial leaders several years ago, the United States proposed that Japan build aircraft carriers and lease them to the United States. This was even considered in the U.S. Congress.

Partly because of the slump in shipbuilding, the shipbuilding industry responded favorably. The president of the Shipbuilder's Association at the time, Tsunesaburo Nishimura, said: "Aircraft carriers are offensive weapons, but Japan has plenty of capability to build them." This proposal was dismissed, partly because it was judged to violate the anti-arms-export principles. But there have been grounds for joint U.S.-Japan arms development for several years now.

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How has Japanese government and industry responded to this idea of military technology cooperation? The government supports this policy as a way to get around the demand for an increased defense budget. The trading companies are showing positive interest in developing this new arms business because of concern over a slowdown in the previously lucrative arms business brought on by increasing domestic arms production. For example, C. Itoh, which is the Japanese dealer for the Hughes Company of the United States, is investigating how much cooperation is possible from private industry.

However, the all-important manufacturers show only a negative reaction. Technological cooperation is likely to include products and parts and not just the provision of knowhow, so from the commonsense point of view it would seem to be very advantageous to the manufacturers. In other words, this is an important opportunity for the manufacturers, who have been plagued by poor mass production results and low profits because arms could not be exported and sales were limited to the Defense Agency.

So why are the manufacturers so reluctant? This puzzle can be solved by looking at the history of technological assistance from America.

The United States has sold a large volume of arms to Japan in order to obtain security in the Far East. As Japanese manufacturers have become stronger, the United States has granted them licenses. However, arms exports are a huge trade item, close to 20 billion dollars annually, for the United States. Weapons, along with atomic reactors and computers, are a strategic product. If many countries begin making their own arms, the U.S. arms makers would suffer serious damage, and the U.S. balance of trade would also suffer.

In other words, the United States would not be able to maintain a strong dollar. There is also the danger that the security of the West, which is connected to the supply of arms, would be affected.

This "politics and economics of arms" puts a damper on the granting of licenses from America to Japan because it is a large arms market for the United States. For example, Mitsubishi Heavy Industries is presently manufacturing the F-15 fighter under a license from McDonnell Douglas of the United States. According to executives of the Mitsubishi Heavy Industries Nagoya works, the domestic production rate is no more than 75 percent, while 25 percent of the parts must be obtained from the United States. The domestic production rate for the F-4E Phantom, previously manufactured under license by the same company, was 85 percent.

Standardization of Weapons in the Far East Is the Next Goal

This dependence on the United States is due to "black boxes." Unknown items include materials such as carbon fiber reinforced plastic used in speed brakes, knowhow for control of engine air intake, and software for the electronics equipment on the aircraft. These high-technology parts are put into a package by the United States so that Japan "cannot understand how they work even if it disassembles and analyzes them" (according to Mitsubishi Heavy Industries). The United States is reluctant to let out its technological knowhow.

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Manufacturers of Arms Using Latest Technology

Ground Arms

<u>Tank</u> (model 88 tank)	Mitsubishi Heavy Industries
<u>Missiles</u>	
Modified Hawk (middle to lower altitude surface-to-air missile)	Mitsubishi Electric, Toshiba, Nippon Electric, Toyo Tsushinki
Tan-SAM (short-range SAM)	Toshiba, Kawasaki Heavy Industries, Nissan Jidosha
Heavy MAT (antiship, antitank missile)	Kawasaki Heavy Industries, Daikin, Tohoku Metal, Matsushita Electric Industrial, Nippon Oils and Fats, Daicel, Nippon Electric, Japan Radio, Ushio Electric, Shinkobe Electric (Sanei Sokki)
Medium MAT (laser-guided antitank missile)	Kawasaki Heavy Industries, Nippon Electric, Mitsubishi Electric, Toshiba
Portable SAM	Kawasaki Heavy Industries, Toshiba, Mitsubishi Electric
SSM (surface-to-surface missile)	Mitsubishi Heavy Industries, Kawasaki Heavy Industries, Fuji Heavy Industries

Air Arms

<u>F-15 Fighter</u>	Mitsubishi Heavy Industries, Kawasaki Heavy Industries, Fuji Heavy Industries, Shinmeiwa Industries, Nippon Aircraft, Ishikawajima-Harima Heavy Industries, Mitsubishi Electric, Toshiba, Nippon Electric, Shimadzu Seisakusho, Tokyo Precision Instrument, Toyo Tsushinki, Nittoku Metal, Nippon Koku Denshi, Daicel, Hitachi Ltd, Shinko Electric, Sumitomo Precision Industry, Shin Chuo Kogyo, Teijin Seiki, Sakura Rubber, Tokyo Glass, Hokushin Electric, Kayaba Industry, Owari Seiki, Kobe Steel, Sumitomo Light Metal Industries, Daido Special Steel
<u>P-3C Antisubmarine Patrol Plane</u>	Kawasaki Heavy Industries, Nippon Aircraft, Shinmeiwa Industries, Fuji Heavy Industries, Mitsubishi Heavy Industries, Ishikawajima-Harima, Mitsubishi

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	Electric, Toshiba, Nippon Electric, Kokusai Electric, Japan Radio, Fujitsu, (Taiyo Radio), (Koden Seisakusho), Shimadzu Seisakusho, Summitomo Precision Instrument
<u>MTX Jet Training Aircraft</u>	Kawasaki Heavy Industries, Mitsubishi, Heavy Industries, Fuji Heavy Industries, Ishikawajima-Harima, etc
<u>Missiles</u>	
Kin-ASM (short-range air-to-surface missile)	Mitsubishi Heavy Industries, Mitsubishi Electric, Nissan Motor, Nippon Koku Denshi, Daikin
AAM (air-to-air fight missile)	Mitsubishi Heavy Industries, Nippon Electric
<u>New Badge System</u> (Automatic Air Control System)	Nippon Electric, Mitsubishi Electric, Toshiba, Fujitsu, Hitachi Ltd, etc
<u>Maritime Arms</u>	
<u>Escort Ships</u>	Mitsubishi Heavy Industries, Ishikawajima-Harima, Sumitomo Shipbuilding and Machinery, Mitsui Shipbuilding, Hitachi Shipbuilding
<u>Submarines</u>	Mitsubishi Heavy Industries, Kawasaki Heavy Industries

Parentheses indicate nonlisted companies

In the coming military technology cooperation, the positions will be reversed. Of course, the United States will still be superior in military technology. However, what the United States seems to desire is technology that can be converted to private use. The superior Japanese technology mentioned above was mostly developed for civilian use. Unlike the United States, which has converted technology to civilian use which was originally developed with the huge financial backing of the Defense Department, Japan has given priority to development of technology for private use. Although research and development expenses in the defense budget are small, priority is given to civilian use and this knowhow has been converted to military use. The result of this strengthening of civilian technology is the trade friction in color television, semiconductors and IC's, and video. Therefore, it is not strange if the real aim of the U.S. demand is seen to be a remodeling of Japan's most advanced technology with the ultimate goal of joint arms development. It is no wonder that Japanese manufacturers are hesitant to provide such technological assistance.

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However, Japan will be almost forced to give its accumulated technology to the United States. The government is saying that "force will not be used." However, the United States is proposing technological assistance in connection with a large increase in defense spending. From the point of view of "U.S.-Japan defense friction," the manufacturers are placed in a difficult position. The United States is also pushing for the standardization of weapons (unification of software and other items so that U.S. forces can use local arms in an emergency) and it has almost obtained complete standardization within the NATO countries. The next area for standardization is the Far East. Including the military technology assistance to China, standardization will be carried out between four countries--the United States, China, Japan, and the ROK. This will be achieved through joint development, and Japan is under political and military restrictions that will make it impossible to back out.

Of course, it is not entirely to the disadvantage of the manufacturers for the military technology cooperation with the United States to make a breach in the anti-arms-export principles. However, there will be a big price to pay. In the wake of the Wada-DeLauer conference, how will the Japanese arms manufacturers react to the political pressure?

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SCIENCE AND TECHNOLOGY

MITI TO LAUNCH 7-YEAR PROJECT TO DEVELOP INTELLIGENT ROBOT

Uses in Nuclear Field

Tokyo GENSHIRYOKU SANGYO SHIMBUN in Japanese 16 Jul 81 p 3

[Text] Nuclear Power Plant Robot: MITI's 7-Year Project To Develop Intelligent Robot

Beginning next fiscal year, MITI has decided it will engage in the development of an "intelligent robot" in a large-scale project. It will invest about 30 billion yen in the next 7 years to develop technologies for a high performance robot which will possess the basic power of reasoning and will be capable of handling complex operations; the robot will be able to serve in a wide range of areas, such as nuclear energy, space, marine development, manufacturing and social welfare. In the area of nuclear energy, especially, its application in operation under high radiation conditions and in reactor disassembling work is anticipated. When the project is realized, Japanese nuclear power plants should be far less susceptible to radiation contamination and will be a step closer to "unmanned operations."

The maintenance and inspection of nuclear power plants are mainly carried out under the threat of radiation contamination; at present these tasks are carried out by humans in most cases. But there are limits to the amount of contamination of employees, and their working hours are restricted.

Ultimately what is needed in our society in order to control, reduce, and eliminate the risk of contamination is the automation and unmanned operation of nuclear power plants.

In these circumstances, during the past fiscal year MITI started a 5-year "nuclear power plant support system" project involving the development of a technology which provides for automatic reactor housing inspection by remote control. The new project, however, will take the old one a step further: its goal is to develop the technologies for an "intelligent robot" possessing a certain degree of independent judgment and capable of handling more complex operations.

In the new project, MITI will focus on 1) high performance sensors, 2) robot language, 3) manipulator, and 4) mobile technology. It will also develop basic technologies which can be utilized extensively not only in such highly technological areas as nuclear power, space and marine development, but also in the automobile industry and in general lifestyle.

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At present, the popularization rate of robots in Japan is one of the highest in the world, but because some robot technologies are "imports," MITI considers that "if the present situation continues, Japan will fall behind the West." It was this feeling which triggered the present move.

With respect to the R & D schedule, the two major national projects, "manufacture of olefin from heavy oil" and "development of an aircraft jet engine," will be completed this fiscal year and they will be succeeded by the project for the development of an "intelligent robot" at a cost of 30 billion yen for the next 7 years.

At present, nuclear power plants are utilizing automated technologies for inspection of the nuclear reactor pressure housing while in service, inspection of the heat conducting tubes of steam producing equipment, and replacement of the control bar driving mechanism; however, if more sophisticated robot technologies can be developed by the present large-scale project and introduced in nuclear power plants, the automation of maintenance and inspection operations will be enhanced.

In the future the most desired application of robot technology is in the repair of malfunctioning equipment under high radiation conditions and in disassembly of reactors. In addition, the development of new robot technology is being sought in reprocessing plants and in the replacement of parts in Tokamak-type reactors.

Help in Improving Productivity

Tokyo KABUSHIKI NIPPON in Japanese 25 Jul 81 p 88

[Text] Overanxious Robot Industry, Due to Decision To Go Ahead With Intelligent Robot Project

[Text] MITI has decided that beginning in FY-82, through the joint effort of government and the private sector, it will engage in R & D on an "intelligent robot" (second-generation robot) which is capable of making decisions and handling complex operations such as assembly operations.

MITI's decision to give priority to the development of an intelligent robot over other advanced technology projects is based on the judgment that the intelligent robot will not only liberate workers from dangerous or monotonous operations but will also help improve productivity by speeding up operations and upgrading precision.

MITI will establish an intelligent robot research organization jointly composed of government and private industry, including the Electrotechnical Laboratory of the Agency for Industrial Science and Technology and more than 10 robot related manufacturers such as Kawasaki Heavy Industries, Yasukawa Electric Manufacturing Co Ltd, Hitachi, and Fujitsu Fanu, and MITI will commission the organization to engage in R & D. The total amount of funding is expected to reach 30 billion yen over a 7-year period, from 1982 to 1988; the budget will be requested through the Ministry of Finance. If this large-scale project is accomplished, the robots are expected to be used in a wide range of areas--not only for industrial uses such as operations within nuclear power reactors and development of marine resources, but also for home and hospital uses for upgrading welfare services.

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At present, the use of industrial robots is spreading rapidly in Japan, and while existing robot manufacturers such as Kawasaki Heavy Industries are preparing to increase their production capacity, a series of new manufacturers such as Matsushita Electrical Industrial Co Ltd and Sumitomo Shipbuilding and Machinery Co Ltd have also entered the market. Competition, therefore, has become fierce. In addition, Japan owns 70 percent of all industrial robots in use worldwide; its share far exceeds that of the United States and European countries. However, the majority of these industrial robots are used for repetitious mass-production tasks such as welding, coating, and hauling in the automobile industry. MITI calls these "first-generation robots."

On the other hand, the robots whose development will begin as of the next fiscal year will be intelligent robots capable of making decisions and handling complex operations such as assembly operations. These are called "second-generation robots." According to MITI, intelligent robots cannot be built without R & D in the following areas: 1) sense and recognition functions which will enable the robot to receive immediately various types of information on the working environment, 2) the ability to operate and function autonomously, and 3) the ability to make decisions and reason so that it can understand the orders given and report the results. Since the United States has already made significant developments in intelligent robot technology, it was considered that Japan must also move ahead, and this could be done through promotion of joint R & D by government and private sources.

The production of industrial robots in Japan totaled about 78.4 billion yen last year, but it is expected to reach 300 billion yen in 1985, and 600 billion yen in 1990. Thus, the development of an intelligent robot will further stimulate the introduction of robots in various industries.

Leading Robot Technology

Tokyo NIPPON KOGYO SHIMBUN in Japanese 25 Aug 81 p 2

[Text] Joint Government-Private Industry Intelligent Robot Committee: MITI to Sponsor R & D To Create Intelligent Robots

[Text] MITI has announced that it will soon establish an "Intelligent Robot Development Research Committee" (tentative designation) composed of both government and private industries to begin technological development and research on an intelligent robot. The committee will study the various problems of creating an intelligent robot, which is a strategic future product for Japan, as well as its marketability and the present technological level; it will seek the developmental system which is most suitable for final creation of an intelligent robot. The committee's work is indispensable if Japan is to lead the advanced Western countries in this field. In September, MITI will organize the committee, which will be composed of more than 10 representatives from industry, academia, and government. It hopes to compile a preliminary report on the developmental structure by next May at the latest.

Toward Taking the Lead Among Advanced Western Countries

The intelligent robot is a robot of the future which will follow the industrial robot now being used for welding, coating and assembly work.

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While the conventional robot is based on a playback system which enables it to reproduce accurately what it has been taught (instructed) by humans, the intelligent robot will be equipped with a sensor mechanism that will enable it to recognize not only shapes but also colors, and on this basis to make decisions and take independent action. It is expected to be put to commercial use by the 1990's at the earliest. When this is realized, the robot will be used not only for complex assembly operations but also in risky marine development and nuclear power works, and in medicine where it will handle human beings. The robot is therefore expected to be used in an extremely wide range of areas. It is indeed a strategic product which will lead the industries of the future.

It is on the basis of these observations that MITI has decided to launch R & D of intelligent robot. At the same time, there is the thought that although Japan is the world's forerunner in industrial robots, it is at disadvantage because all of its basic technology depends on the West.

MITI wants Japan to lead the world in robot technology, and this must begin with basic technologies which it will promote by actively supporting the R & D on intelligent robots.

For this reason, the proposed R & D will first of all study the marketability of intelligent robots, present technological levels, and problems anticipated in the future. Then it will select the most suitable developmental method in terms of the project's direction and structure. The committee's goal is one of fact-finding, which must precede actual full-scale development work.

MITI intends to complete the study by next May and to begin the full-scale development of intelligent robots after 1982.

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SCIENCE AND TECHNOLOGY

10-YEAR PROJECT FOR FIFTH-GENERATION COMPUTER ANNOUNCED

Associative, Learning Functions

Tokyo NIKKEI SANGYO SHIMBUN in Japanese 9 Sep 81 p 1

[Text] The Ministry of International Trade and Industry (MITI) has decided on the 3-year first-stage research objectives for the 10-year fifth-generation computer plan scheduled to begin in FY-82. The fifth-generation computer will be composed of super-high-speed computation elements such as Josephson elements. It will be a completely new computer capable of "association" and "learning"--functions which have been absent in computers up to now and which will augment the capacity of the machines significantly. MITI is consolidating domestic and foreign computer manufacturers' efforts in furthering this important project. It will be divided into three parts: the initial stage will take 3 years; the middle stage, 4 years; and the final stage will involve another 3 years. The initial stage, 3-year research will begin in FY-82.

Associative and Learning Functions Are Goals

The research objectives decided on by MITI are as follows: During the initial stage (3 years), a 10-billion-yen research fund will be poured into the development of the electronic circuit unit (module) which will make up the fifth-generation computer and the development of the basic computer which will operate the respective modules. Development of a facility that can process spoken words--a greatly awaited peripheral device that will make human/computer conversation possible--will also be attempted.

The fifth-generation computer will be a crystallization of all the achievements in computer theory up to now, encompassing the computer's basic design, software and peripheral equipment; in each of these fields, the current computer and peripheral equipment capabilities will be surpassed by a wide margin.

In the research objectives, emphasis is being given to the structural design of the respective electronic circuits which will form the basis of associative and learning functions--a deductive function module, a tree-structure information

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base module, a classification-structure information base module and so on. The structural design for the control module which unites each of the electronic circuit units will also be attempted. This, then, is the chief hardware agenda for realization of the fifth-generation computer.

The core element of the fifth-generation computer--the associative function--will enable the computer to think for itself, in a manner of speaking. For example, the input may be either "MITI" or "Ministry of International Trade and Industry." The computer will have the necessary flexibility to handle the two terms as being synonymous. Heretofore, computers had to have minute human direction beforehand, and unless there was a command entry to handle "MITI" and "Ministry of International Trade and Industry" as synonymous terms, they were handled as different entities. By possessing an associative capability, the computer will make autonomous judgments without prior human direction. Learning is a function whereby in the process of making the same type of computation, the computation procedure becomes progressively more complex. As with a human being, the computer becomes more sophisticated with each new task. Heretofore, the speed of homogeneous computations, regardless of the number of times they were performed, was the same for each operation; but a computer with a learning function will increase its computation speed each time it performs its task. Such capabilities are created by a deductive reasoning module and information base modules of various kinds. They are patterned after the human brain's nerve circuits.

In the software sector, the development of basic programs for operating the respective modules will be pursued, as well as the development of a basic program for unifying the various modules and for overall operation. In this connection, the data transfer volume between modules will be computed by means of simulation tests so as to create an efficient basic program.

In addition, the development of information base management software--automatically synthesized software for programs designed to enhance associative and learning functions from the software side--will also be attempted.

With regard to peripheral equipment for the fifth-generation computer, emphasis will be given to a conversation machine that uses normal spoken words. From the hardware aspect, the development of a device capable of 100 percent recognition of spoken words will be attempted. From the software perspective, the development of software that can enable programming with normal spoken words, so that a spoken word recognition facility will be used in full, will be sought. The aim is to complete construction of the basic foundation for the fifth-generation computer in 3 years.

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Cooperation With Foreign Countries

Tokyo NIKKAN KOGYO SHIMBUN in Japanese 9 Sep 81 p 1

[Text] According to a disclosure by the Ministry of International Trade and Industry (MITI) on 8 September, West Germany has decided to participate directly in the "research and development for the fifth-generation computer" that Japan

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will launch next year. West Germany will send a mission to Japan in mid-October. Britain and France also intend to participate in the computer research and development, and they are now in the process of negotiating with MITI. Previously, the West German Government had taken a wait-and-see attitude. But it has not decided to send a mission to our country to get in touch with MITI regarding participation in the project. The mission will be headed by Professor Marx, the chief of the Research and Technology Agency's Data Processing Section. This move by West Germany is indicative of the strong interest among the major West European states in the fifth-generation computer research and development, and the project has taken on an international cooperative research aspect. Among the West European states, Great Britain was the first to react to the fifth-generation computer research and development project. The Commerce Minister Baker visited Japan a while ago, at a meeting with Minister Tanaka of MITI, he expressed his country's strong interest in the project as an aspect of promoting Japan-Britain industrial cooperation. They agreed to gradually work out the business arrangements. Based on this agreement, Assistant Vice Minister Mangy [phonetic] is scheduled to visit Japan 10-11 September to make further detailed arrangements. France, too, has registered strong interest. In the midst of these reactions, previously the West German Government had not demonstrated any significant reaction.

Now, however, the Government of West Germany has decided to send Prof Wolfgang Biebell [phonetic] of Munich University to the "Fifth-Generation Computer International Symposium" to be held 19-22 October in Tokyo (sponsored by the Japan Data Processing Development Association and backed by MITI) as a speaker. At the same time, West Germany decided to dispatch a fifth-generation computer professional mission, comprised of 10 representatives from government, university, industry and academic associations and headed by Professor Marx, to Japan for the purpose of discussing with MITI the format of future research and development cooperation.

With regard to the symposium, approximately 250 participants from Japan and 50 participants from overseas are scheduled. Foreign participants include: Professor Figenbaum [phonetic] of Stanford University, Professor Allen of MIT, Professor McCormick of Illinois University (United States); Professor Trellibune [transliteration] of Newcastle University (Britain); and Professor Kahn of the National Data Processing/Automation Technology Research Center (France). Professor Reese [phonetic] of the IBM Watson Research Center will also attend the symposium.

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SCIENCE AND TECHNOLOGY

DRIVE FOR HIGH TECHNOLOGY AT MITSUBISHI ELECTRIC DISCUSSED

Tokyo SHUKAN ORU TOSHI in Japanese No 456, 28 Aug 81 pp 52-57

[Text] High Technology Potential of Mitsubishi Electric Sufficiently Different From Hitachi or Toshiba

During his term as president, Sadao Shindo breathed new life into Mitsubishi Electric Corporation, whose operation was dubbed "Tonosama Commerce," and significantly vitalized its business activity. It has been 2 years since the corporation moved from the Shindo system to the present Katayama (Ninhachiro) system. The goals for the 1980 strategy were set by President Katayama as "energy, electronics, and overseas." During the past year, Mitsubishi Electric concentrated all its energies on the construction of a system with which to implement the new strategies with great vigor.

Large-Scale Assault on Semiconductors With Corporation's Future at Stake

First of all, an "LSI research center" was newly founded in April 1980. The research system, which had been scattered, was unified. The aim was to strengthen the consolidated development power, including the material, equipment, and manufacturing technology. At the same time, an "electronic merchandise development research center" was also established in order to strengthen the audio machine department.

Furthermore, an "office automation project" office was established in October 1980, and a defense system project office in November. By May 1981 a personal computer department was established, and by June an information electronics research center was built. It thus launched research and development of optoelectronics, including semiconductor lasers, optic fibers, optic IC's, and photosensors.

Moreover, since electronification has gone deep into all business departments, a conventional vertical organization alone has become inadequate to cope with the situation. In order to strengthen the horizontal coordination of the organization, headquarters for the promotion of electronics-related businesses and headquarters for overseas businesses to coordinate overseas activities were established. It has thus put its organization on the offensive, and made ready to implement its 1980 strategies. The directors and personnel have also been greatly changed, and a rejuvenation of personnel was attempted in the process.

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As soon as the system adjustment was completed, Mitsubishi Electric turned to an all-out assault on the semiconductor, which constitutes one of the most important departments for the promotion of electronification. Semiconductors have entered into practically every field, so that the technological power of transistors in itself is going to have a decisive effect on success in the future.

Mitsubishi was among the pioneers in semiconductors, but it specialized too much in IC's for the public such as those used in watches and cameras, and completely neglected industrial IC's such as the 16 K RAM (random access memory).

In order to secure an advantageous position for the next mainline--64 K RAM--Mitsubishi Electric has resolutely carried out a large-scale expansion project, betting the future of the corporation on it.

At present, 64 K RAM's are being manufactured at the rate of 30,000-50,000 a month at its headquarters plant, Kitaitan Manufacturing Plant, located in Osaka.

Mass-production of this item will be carried out in earnest at its Kumamoto plant. In July, production of 100,000 64 K RAM's a month was started, and new facilities are being added. It is expected that by January 1982 the rate will be 300,000 per month, and by June 1982 the rate will be 400,000 per month. As part of this effort, a portion of Fukuoka manufacturing plant belonging to the heavy equipment department has been converted to a semiconductor assembly plant, and the future design includes production of logic IC's at Nishijiro plant in Shikoku, which is expected to begin production in earnest in the spring of 1983.

Thus strengthening itself, Mitsubishi Electric is aiming to join the top ranks of those dealing in the 64 K RAM. "Mitsubishi semiconductors, together with Hitachi semiconductors are favored by the users" (according to Kimio Sato, director of the semiconductor business department), so that its all-out assault is worth watching. It is also investigating the feasibility of overseas onsite semiconductor production. Joint production in the United States with Westinghouse, with which it has a cooperative relationship, is also a possibility.

The pillar of the energy strategy--the other E--is nuclear energy, after all. Although it is a subcontractor to Mitsubishi Heavy Industries, Westinghouse's PWR (pressurized water type reactor) occupies approximately 50 percent of the domestic share. The P type nuclear reactors are said to be the mainstream of the future nuclear reactors in the world, so a great potential exists in this area also.

Moreover, Mitsubishi Electric is the world's top manufacturer of gas contact-breakers and gas-insulated substations of a capacity smaller than 500,000 kW. It is among the world's three best regarding substations of all types and capacities. It is in a position to compete for the top position with Hitachi for the production of chopper type electric trains.

Overwhelming in Defense and Space Technologies

Among the three heavy electric firms, Mitsubishi, compared with Hitachi and Toshiba, is said to have something missing. Although its technical power is superior, its business skill is mediocre, so that the combined total power is inferior.

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However, Mitsubishi has something that cannot be denigrated by others when individual product and technology are concerned. It shines in a different way from Hitachi and Toshiba. In other words, there is no doubt Mitsubishi has something distinctly different from others.

For example, the defense-related technology is one area. According to the 1980 ranking of firms dealing with the Defense Agency, the Mitsubishi (contract) amounted to 72.4 billion yen. As far as the total volume is concerned, Mitsubishi Electric ranked fourth, after Mitsubishi Heavy Industry, Ishikawajima-Harima, and Kawasaki Heavy Industry. But in the field of electronic equipment, it was far ahead of Toshiba (32.9 billion yen) and Nippon Electric (22.3 billion yen).

It holds a 100-percent share in firing control systems (FCS) and a 50-percent share in all kinds of missiles. In addition to air-to-air and air-to-ship missiles, Mitsubishi leads others in ECM with reversal detector, ECCM, and ECCCM, which require even more advanced technology. Mitsubishi's radar equipment is also valued very highly.

In dealing with the so-called new BADGE system (automatic air defense warning system) costing 150-200 billion yen, it joined forces with the Nippon Electric group together with Toshiba in order to oppose Hitachi and Fuji Industries. It is an accepted view that a coalition of three firms with past experience should be in an advantageous position.

Another field which is as unique as the defense industry is the space industry. The domestic artificial satellite production is almost completely monopolized by Mitsubishi. The past records of Mitsubishi in defense and space technologies are proof of its technical strength, and the effect of its technical influence should be outreaching.

Computers, which occupy the central place in the electronics industry, also give a special color to Mitsubishi's strategy. Mitsubishi's computer business ranges widely, from large-scale to medium- and small-scale computers, but its core is the OA (office automation) field, which is expected to make rapid progress in the future.

In the OA field, Toshiba is in the lead as far as the combined total force is concerned. However, on the basis of individual products, Mitsubishi has the top share of office computers. Technologically, it was the first to introduce the office computer using the Japanese language. By March 1981, 50 percent of all office computers were using the Japanese language.

The fastest speed, or the G III standard for facsimile, which is an essential part of the OA equipment, was set by Mitsubishi. Mitsubishi's phototelegraphic technology is also said to lead the world. Mitsubishi recently put on the market a Japanese word processor, which has been the center of attention lately, and thus increased the weight of its OA equipment. The Mitsubishi word processor uses the Kana and Kanji conversion format with a grammatical function. Mitsubishi is said to be technically closest to the successful development of a voice-input word processor.

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It will take up the business personal computer, which is going to become one of the important types of OA machines, in the spring of 1982. Since Mitsubishi has been lagging in the field of personal computers, the goal will be to "produce an epoch-making machine no one else has ever thought of" (President Katayama). At present, 8-bit microcomputers are most common; therefore, Mitsubishi's new machine probably will include a 16-bit microcomputer. Demand for the microcomputers needs to be developed widely, so that subject is being investigated by every department. Mitsubishi is determined to give a hard chase to the leading manufacturers.

Mitsubishi's own company brand office computers are being exported. Sales in the United States are continuing smoothly, so the export of office computers has been stepped up, together with the export of semiconductors and IC's.

As a result of a good sales record in office computers, the computer department went into the black in the latest period. Therefore, production of large-scale computers, which was weak in the past, will be emphasized in the future for the purpose, in part, of strengthening the technological development power. The IBM convertible type (interchangeable machine) is being developed today with eyes set on 1983 for the development of a large-scale market in earnest.

It is Fuji Industries which is advancing rapidly today with the IBM convertible type machines. Now, Mitsubishi Electric is taking the offensive in the large-scale computer market and appears to be chasing Fuji Industries. One can get a glimpse of the extraordinary posture regarding electronics from this alone.

Strengthening Cooperative Ties With U.S. Westinghouse Co

Mitsubishi Electric has made a few significant hits in the household electric department, such as the Futon (quilt) dryer and force-fed oil heater, but it is behind in the VTR and audio departments.

Mitsubishi Electric is plotting a daring strategic conversion to production of electronic merchandise such as VTR and audio items, so that the present ratio of 70 percent household appliances to 30 percent electronic merchandise can be quickly changed to 50-50 in the future.

Of these, the VTR will be the main thrust. Up until last year, it was only a "fledgling merchandise" receiving a supply of parts from Victor. Starting this year, an overall changeover to independent production has been made. Mitsubishi Electric has a solid technological background, as shown by the development of a picture search machine using VHS format, which was heretofore considered difficult to achieve. Video disks, which are considered to follow the steps of VTR, are being developed now. In the field of television, the sales of giant-screen color TV "Auroravision" have been steady to the owners of ball parks and advertisement towers.

In addition, in the field of automotive parts, emphasis is placed on the electrification of the automobile, including a trip computer and an electronic fuel injection device. In the field of robots, production of arc-welding robots, which is expected to grow 30-40 percent in the future, began in August at the rate of

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30 units a month. It is hoped that 20 percent of the market share can be secured by 1985.

The sequencer, which is handled by the machine business department, is also growing at the brisk pace of 30-40 percent a year, thanks to the movement toward rationalization and labor-saving. The K-series which was put on the market in 1980 has been moving smoothly. Removal of humans from production lines is being promoted by these labor-saving and rationalizing machines. At its Himeji plant, eight production lines have been completely taken over by machines.

Mitsubishi's technical potential will blossom during the process of consolidating its strongly electronic-oriented system. The strength of Mitsubishi's technical power can be appreciated from the value placed on it by U.S. Westinghouse, which has maintained a technical tie with it. The coalition between Mitsubishi and Westinghouse has lasted more than half a century, since 1923, and the tie is very strong. In the beginning, the contract was one of technical assistance. In 1966, it became a contract of technical exchange, and the exchange has continued since then on the basis of equal partnership.

The contract agreement revised this year has expanded the range of cooperation into operational management, or overall cooperation. This speaks clearly of the increased esteem Westinghouse has for Mitsubishi. Over the past several years, the top management personnel of Westinghouse have visited Japan one after another, showing their interest in overall operation and management, including labor management and production management. On the technical side, technical exports by Mitsubishi are increasing in number, and in some departments the situation has been completely turned around.

Nevertheless, there are still many problems to be overcome before Mitsubishi can join the ranks of real international enterprises. Aside from the products, the most urgent requirement is the improvement of financial affairs. Being far behind Hitachi and Toshiba financially, Mitsubishi must also positively develop a financial affairs strategy. In September this year, \$100 million in Eurodollar convertible bonds will be issued, and domestically, a chance for increasing capital from public subscription may also arise.

As Mitsubishi Heavy Industry Sees It

Mitsubishi Electric, which was launched from the electric plant of Nagasaki Shipyard, remains a "subsidiary company" of Mitsubishi Heavy Industry. The tie is strong because of the blood relation, but on the other hand, mutual repulsion resembling hatred of a close relative is also strongly felt.

For example, the manufacture of a power generating station is being carried out cooperatively, with the Heavy Industry responsible for the boiler and the turbine, while the Electric is responsible for the generator; the Heavy Industry is the main contractor and the Electric is the subcontractor. From the viewpoint of the technical camp of the Heavy Industry, the difficulties encountered in connecting the turbine and the generator and the high cost of the generator are always a source of dissatisfaction.

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On the other hand, the Electric as a subcontractor complains of "bidding low in order to secure an export item and putting the blame on us." It is an old story by now, but the rivalry between these two companies surfaced around the Mitsubishi Nuclear Power Industry, which was positioned as the nucleus for the development and production of a nuclear power plant. To the Heavy Industry, which is eager to push for construction of a practical production system, the Electric, which emphasized research and development, was always a pain in the neck. The strained relationship between the two companies is said to have lasted until the Heavy Industry shouldered the responsibility for the cumulative losses of the Nuclear Power Industry and the industry was reorganized into a unified company under the leadership of the Heavy Industry.

These two companies also collided head-on in matters related to missiles, which comprise the frontline of the weapons department. More recently, they fought over the position of main contractor for the licensed production of the A-M9L which is carried on board the F-15, and the Heavy Industry was the final victor. The Electric used to be in charge of missiles of this series, so the recent coup is considered by the Heavy Industry as reestablishing itself as the rightful system organizer.

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SCIENCE AND TECHNOLOGY

VLSI TECHNOLOGY CMOS GATE ARRAY DEVELOPED BY TOSHIBA

Tokyo NIKKAN KOGYO SHIMBUN in Japanese 8 Nov 81 p 14

[Text] Toshiba Corporation (president, Shoichi Saha) announced on the 10th that it had developed the technology for the world's fastest gate array (semicustom LSI) using CMOS construction. This technology, along with the company's other technology, makes possible 6,000 gate number, 2 micron design line width, and 1.5 nanosecond propagation delay time, which represents the world's highest level in high degree of integration and high speed. The company plans to improve the reliability of this technology and to develop mass production technology so that it can market the product starting in 1982. Regarding gate arrays, Toshiba will be the third to enter the market, following Fujitsu and Oki Electric, while Hitachi is planning to enter the market soon. Thus, there has been a sudden burst of activity in the gate array market.

In the past, the special logic circuits used in computers, ME equipment, measuring equipment and communications equipment were TTL or ECL type, consisting of a combination of a number of high-speed bipolar IC's but recently miniaturization, lightness in weight, and low power consumption have become greatly desired properties in such equipment, and there has been a demand for special LSI which can conform to these needs. On the other hand, special LSI are expensive to develop, and the production involves many problems, one of which is small volume production with associated high unit cost.

Attention has been directed to gate array as the solution to this problem, and this is a product which can be produced in a fairly short time in fairly large-scale mass production and at low cost. Gate array includes, aside from CMOS, the TTL which is based on bipolar IC technology.

Toshiba has an abundant technological record where CMOS is concerned. It focused attention on the development of CMOS characterized by small power consumption and high degree of integration, using its own CMOS technology and super LSI technology to develop a CMOS gate array with a high-speed operation rivaling that of the TTL.

The products which Toshiba developed and test produced are five types of high-speed VLSI using 2-3 micron finely finished and two-metal layer distribution line technology with gate numbers between 880 and 6,000. This company already has produced high pressure resistant LSI with gate number 400 for intracompany use, and this present development has filled out this product group.

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The high speed gate array was realized through 3-micron very fine finish technology and two-metal layer distribution lines, to make possible 2.5 nanosecond propagation delay time per internal gate with the same level operating speed as the advanced low power Schottky TTL.

The super high speed gate array incorporates 2-micron very fine finish technology and aluminum two-layer distribution lines, to enable a propagation delay time of 1.5 nanoseconds, the same level as the high speed Schottky TTL.

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SCIENCE AND TECHNOLOGY

FUTURE OF PLANT EXPORT INDUSTRY DISCUSSED

Tokyo NIHON KOGYO SHIMBUN in Japanese 6, 7, 8, 10 Jul 81

[Article by reporter Fumihiko Matsuda]

[6 Jul 81 p 7]

[Text] Japan's plant export industry is about to face a turning point. Plant exports, which broke the \$10 billion mark, reaching \$12.9 billion in FY-79, showed a recession in FY-80, tumbling down to the 1968 level of \$8.8 billion. Plant exports were dubbed "exports without friction" and it was hoped they would be the most promising export commodities of the 80's, but they were curbed in the wake of the Iran-Iraq war and by suspension of construction of the large plants bound for China. In addition, international political and social changes such as the economic sanctions against the Soviet Union affected these exports. Meanwhile, Japan's plant industry, in the midst of the severe plant export conditions, has started to reverse its gray picture led by the three major engineering corporations. Changes have resulted due to advancements into new fields through development of new technologies around the axes of the reviewing of economic strategy, reinforcement of the economic camp, change of generations, energy conservation and energy substitution. Now, let us look into the future trend of plant exports and the destination of this industry in pursuit of a new direction in the midst of the transition period.

Inheritance of Human Resources

"We lost our foremost attraction, Akiyoshi Tamaki, but I am encouraged to inherit the human resources raised on the command of the former president," said President Masakazu Tamaki, who became the new president of Chiyoda Chemical Engineering & Construction, the top firm of the plant industry, after the sudden death of the former president, at a press interview on the 2d of this month, exactly 1 month after he took over the office of president.

The former president, the late Akiyoshi Tamaki, was an excellent manager who broke away from Mitsubishi Oil, established Chiyoda Chemical Engineering & Construction soon after the war, and raised it into a top world engineering firm. He was also the commonly acknowledged top leader and a pioneer in Japan's plant engineering industry. The shock of the loss of this gigantic star of the industry was felt

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keenly, but at the same time, it may be considered to be an incident that symbolizes the plant industry at a turning point.

The death of the former president (also chairman) brought a change of generations to Chiyoda Chemical Engineering & Construction, but signs of change have been visible for the last few years. It was in June 1979 that the company adopted a collective operation system under executive council. "Since the president ran a one-man show, it is questionable that a collective operation system was always at work" (President Masakazu Tamaki). However, the rails were already laid, and the change of generations, including those in affiliated companies, will be further speeded up under the new president.

Challenge by Dividing Responsibilities

These phenomena are commonly seen in the three plant engineering companies. For example, in Japan Gasoline, President Yoshio Suzuki has moved up to become chairman. The bilateral structure with Chairman Suzuki and President Haruo Shinoda started in June last year. "A two-headed structure with two top leaders to strengthen management" (Chairman Suzuki) is viewed by some in the industry as "the cloister government of Chairman Suzuki," but it is a fact that the rights of management were divided. Especially in view of the fact that Chairman Suzuki's key posts as a doyen of the industry are expected to increase--he was recently assigned to the office of director of the Engineering Promotion Association succeeding the late Akiyoshi Tamaki and also to serve as chairman of the "81 Chemical Plant Show" to be held at Harumi this autumn--it appears that the lineup will be: Chairman Suzuki for activities related to the plant engineering industry and President Shinoda for activities within the company. Toyo Engineering, the youngest of the three companies specializing in plant engineering, celebrated the 20th anniversary of its establishment in May this year. Although the company is still behind the two leaders, Chiyoda and Japan Gasoline, in sales and in construction orders received, Toyo Engineering is planning to challenge once again: "We have consolidated our foundation to leap from TCE that manufactured fertilizers to the world's top comprehensive engineering firm" (President Masayoshi Naito). In management, a system to divide the responsibilities among three vice presidents, Fujimoto, Cho and Sakurai, has been incorporated, and new strategies are being launched one after another to consolidate its position as one of the "big three" in the background of the new "listed" status and the 10th anniversary.

Mitsubishi Heavy Industries and Kawasaki Heavy Industries, the two companies which play an important role as comprehensive hardware oriented makers in the plant industry other than the three specialized companies, also concurrently celebrated the inception of a new president and realized the change of generations at the end of June this year. In the case of Mitsubishi Heavy Industries, it is thinking of breaking away from its role as a conventional hardware maker to a comprehensive plant engineering business including software, with the Chemical Plant Engineering Center (MCEC) serving as an axis. The company is delaying the policy change partially as a result of the direct damage received by the cancellation of projects in connection with the Iran-Iraq war and the suspension of plant construction in China.

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Reevaluation of Domestic Market

Kawasaki Heavy Industries is a similar case. Kawasaki, which was promoting work to construct a cement plant in Iraq, has now been forced to hold it up for a while, and its plant business balance has been severely damaged.

In reaction, criticisms have been heard within the company: "Our simplistic attitude of looking for overseas markets because of the difficulty in securing domestic orders was a factor which contributed to the problem." It is said that the company is now focusing on reevaluating the order securing system.

This situation is not exclusive to Kawasaki Heavy Industries. The opinion that "overseas markets are risky and domestic market reevaluation is necessary" is about to become mainstream thinking, although risk preventive measures are improvised based upon the increase in risk in the overseas country. For instance, both Chiyoda and Japan Gasoline, which used to claim an overseas construction order ratio of over 80 percent, revealed a decline to 60 percent in FY-80. Conversely, domestic constructions increased. With confidence restored by these results, it is a natural consequence that each company has begun to put more energy into securing domestic work orders. "It is not that we think lightly of overseas opportunities, but the ratio of overseas and domestic orders should ideally be half and half for the stability of the business operation" is the perception commonly shared by the leaders of the industry. Compared to the attitude of the plant industry prevailing in the past, which worshiped only the overseas markets, the new posture is a 180-degree turn. Thanks to the change of generations, the operational transition of each maker is progressing steadily.

[7 Jul 81 p 7]

[Text] Revitalized Activities of Consortium

The recently presented "FY-81 Commerce White Paper" emphatically calls for organizing an "international consortium (international business partnership) as a means to expand plant exports: "Due to the occurrence of situations where international armed conflicts and the change in internal policies threaten to uproot plant construction, there emerges a tendency for firms of one nation to hesitate to accept orders for a large plant from other nations. In this perspective, the necessity for an international consortium is increasing so that the liability for risks can be diffused, merits of public aid from each nation can be utilized, fund procurement ability and technological ability can be mutually furnished and perfected, and cost reductions can be realized by procuring part of the plant supplies from a third power." Without the necessity to be pointed out in the Commerce White Paper, many examples can be seen pertaining to achievements and bids submitted by companies which formed a consortium with European and American reputable plant engineering firms in response to international tenders for large projects overseas. Nevertheless, international consortiums previously were organized more for reasons of strategies for securing orders and insuring work volumes, whereas the recent consortiums entered into by Japanese firms have different purposes: "The international consortium is indispensable from the aspects of facing country risks and of finances" (Chiyoda Chemical Engineering & Construction, Toyo Engineering). That adds up to the arrival of a genuine international consortium era.

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Duel of the Largest Consortiums in History

In fact, some even say that almost all of the large projects scheduled to be bid upon this year and next year will be subjected to competition for orders to be received among the international consortiums themselves.

For instance, business negotiations relating to the Nigeria LNG plant (annual production 20 million tons), which draws attention as the largest LNG plant project of this century calling for a total cost of 1 trillion yen (including LNG vessels), will soon enter the stage of a scramble for securing orders among the three industrial consortiums which passed the preliminary examination: 1) Chiyoda Chemical Engineering & Construction-Rumas [phonetic] (America), 2) Japan Gasoline-Kellogg (America)-Daelim Industrial (Korea), and 3) SNAM (Italy)-Foster Wheeler (same).

The final bout of the international consortiums, the greatest of its kind in history, is temporarily held up because the bidding has been postponed to next spring, but the consortium era has arrived, not only in Japan but in the world. Also, for business talks relating to the Malaysian large fertilizer plant of the ASEAN No 2 project scheduled to be offered for international bidding, international consortiums were formed in advance to be ready for the submission of bids, which is rather rare for a fertilizer plant. In accordance with this system, the participation of five consortiums featuring Japanese firms is expected after the preliminary examinations: 1) Toyo Engineering-Mitsui Toatsu Chemicals-Kellogg (America), 2) Mitsubishi Heavy Industry-C. Itoh-Sunamu [phonetic] (Italy), 3) Kobe Steel-Nichimen-Friedrich Uhde (West Germany), 4) Hitachi Shipbuilding & Engineering-Humphly Glasgow (England), 5) Chiyoda Chemical Engineering & Construction-Mitsubishi Corporation. As the ASEAN project will be implemented by borrowing yen from Japan, Japanese firms by themselves could properly bid and win without any problem. However, even the bidding on this project is said to be attended by international consortiums.

Also, in regard to the Indonesian LNG plant (total sum 150 billion yen), an order which was successfully obtained recently by a Mitsubishi group consortium--Chiyoda Chemical Engineering & Construction-Mitsubishi Heavy Industries-Mitsubishi Corporation--ended up, strange to say, as a case where the project was subcontracted to a local subsidiary of Bechtel of America which has gained experience in building plants in Indonesia. A complex international consortium system beyond capital affiliations is about to be forged.

International Procurement of Machinery and Equipment

The international consortium system as described above has become common sense in the business world. On the other hand, it is the Japan Machinery Exporters' Association (director, Ichiro Terano) that is active in advocating "International Exchange for Plants" under the flag of "frictionless trade" paying heed to the international trade frictions endemic in automobile exports, from the standpoint of international industrial cooperation and promotion by the private sector. This includes the holding of regular conferences for exchange of technologies in regard to cooperation for "plant exports to Third World nations" with European nations such as West Germany, Italy, Belgium, France and the Netherlands, and moderately advanced nations such as Brazil and Korea. "The European business

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world and nations are looking forward to cooperation with Japan in plant exports to Third World nations. Japan will also profit greatly from financial deals such as the conclusion of the joint insurance agreement" (executive office of the Japan Machinery Exporter's Association). It is hoped that the service window exchange among groups of companies will advance to the level of exchange among the member firms.

Meanwhile, the movement to "strengthen the international procurement of plant machinery and equipment in unison with the formation of international consortiums" (President Masayoshi Naito, Toyo Engineering) also attracts attention. In the overseas projects, employment of foreign labor has become a general practice, and following the patterns of human resources, material procurement is also multinationalized. With this trend in mind, the following point of view is expressed: "The recession in plant exports is only statistical. Statistics do not include cases of business contracted for cost plus fee and cases of overseas procurement. Plant exports are not necessarily in a recession" (Executive Director Hiromi Goto, Chiyoda Chemical Engineering & Construction). Conversely, the consortium system contains an aspect in which the export of plant machinery can be anticipated even if Japan is defeated in international biddings. The order for the modernization project for two oil refineries planned by Pertamina of Indonesia was given to two American companies, Bechtel and Floor [phonetic] over Japanese companies, but it is said that "one-third of the plant machinery and equipment will be procured from Japan," and machine makers have already received orders.

While the waves of internationalization reach the shore led by international consortiums, a "new internationalization era" has arrived when Japan's plant business is questioning whether or not it can survive as a world plant maker after it has deviated from the road of international competition and has selected international cooperation.

[8 Jul 81 p 8]

[Text] Relaxant of International Friction

In order for Japan's plant industry to survive, in the unanimous opinion of the leaders of both specialized and nonspecialized companies in this industry, technological ability (including technological development and research and development) is the decisive and inevitable factor in winning the competition, much more than the reinforcement of international competitive power. MITI authorities ranked plant exports as a "promising export commodity of the eighties based upon technological capability," and expects it to play the role as a "relaxant" to avoid trade friction because of that vision.

Specifically, the engineering industry which is basically the core of the plant industry, is by its origin considered a typical resource and energy conserving, knowledge-intensive industry. The engineering industry, which gathers technologies and knowhow accumulated in each field and utilizes them as integral systems, may be a mysterious industry from the outsider's viewpoint. In that sense, the Engineering Promotion Association is noteworthy as a clear expression of the intention of the industry to aim at the establishment of a plant industry supported by these technological capabilities.

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The association is new: it was organized only in August 1978. Since its inception, it has conducted investigation and research stressing social development and resource development systems, and has worked for the development of engineering technology during its brief existence. The structure with Inayama-Suzuki is now succeeding the structure with Chairman Yoshihiro Inayama-Director Akiyoshi Tamaki, who were the leaders from the founding of the association, as a result of putting in the office of director Yoshio Suzuki, chairman of Japan Gasoline. New Director Suzuki is one of the executive managers who has been strongly devoted to advancement into new technological development and new fields such as social development, resources and nuclear power since the days when he served as president of Japan Gasoline. It is speculated that as the mediator of the industry, the director will lead the activities of the engineering industry greatly stressing technological development.

Also Promotion of New Energy Development

On the other hand, in the midst of severe foreign and domestic conditions--the turbulent world situation and the plant industry confronting a turning point--it is true that each company is wrestling with technological development and development of new fields by means of its own creativity and ingenuity. For example, Chiyoda Chemical Engineering & Construction, partially due to the late president and chairman, Akiyoshi Tamaki, who was an engineer, has been making an annual investment of 5-6 billion yen in research and development expenses" (Masakazu Tamaki, president of Chiyoda Chemical Engineering & Construction). The company is engaging in research and development in practical themes such as development of heavy oil lightening systems and LNG cooling and heating utilization systems, rather than "advanced technology."

In contrast, Japan Gasoline plans to advance into multilateral new technologies and new fields primarily with the triad of social development, resources and nuclear power. Social development of the three is meant to serve as a test case for the company to grow into a comprehensive engineering firm like Bechtel and Fluor [phonetic] of America. Furthermore, Toyo Engineering is also pushing straightforward research and development aimed at becoming a "world top engineering firm covering TEC of fertilizers, general chemistry, nuclear power and social development.

Likewise, relating to companies other than those specializing in plant engineering, Kobe Steel, which has recently attracted attention in the business world as the "third power" of the plant industry, has made "energy saving," "clean energy" and "substitute energy" the pillars of its new business ventures and is approaching this field by naming the new activities "three energy strategies." The objective of each company is slightly different due to the corporate policies, but the point commonly shared is that the focus is on energy and resource conservation and development of new energy." In this sense, the "81 Chemical Plant Show" to be held 30 September-3 October this autumn (chairman Yoshio Suzuki, chairman of Japan Gasoline), is very interesting as it openly and directly indicates the direction of the industrial plant world through a display which selects energy conservation and development of new energy as themes.

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Integration of Technologies at Issue

In parallel with the plant show, the "INCHEM Tokyo 81 International Forum" and the "81 Chemical Plant Technological Conference" will be held, where some research results and science papers are to be presented. Also, in the special session of the "International Forum," "Ideal Future Japan-China Technological Cooperation" will be the theme of discussion scheduled as the Japan-China Joint Chemical Industry Meeting. With all these exciting activities scheduled, the results of this international conference, which gathers the plant industry engineers in one place, are very much anticipated.

Incidentally, although the technological capacity is the "decisive factor" for the establishment of the plant engineering industry, it is also a fact that engineering technology (software) weighs more in importance than R & D technology when the two are weighed in the balance. Not only is it said that "there is a limit to the research conducted by plant engineering companies" (Yoshio Suzuki, chairman of Japan Gasoline), but it is even argued that "basic research in new technology is of no use for an engineering company" (leading figure of a company).

In particular, taking into consideration the fact that plant engineering must deal with technological development which spreads over extensive fields, how to handle the proposition, "to explore broadly and lightly into research and development, and to probe deeply into engineering technology," will be an important issue.

However, it is an important role that is played by the plant engineering industry and business: the practical application of energy and resource conservation and new energy development. In this respect, it is essential to determine how to incorporate new technologies and engineering technologies into an integral entity. This is, indeed, a challenge to the survival of the plant engineering which must solve the question of "how to produce an energy-efficient plant safely at a low cost."

[10 Jul 81 p 7]

[Text] As of 30 June, Yoshio Suzuki, chairman of Japan Gasoline who is also the director of the "81 Chemical Plant Show," became the new director of the Engineering Promotion Association, a group that leads the plant engineering industry. The baton was handed over to him by the sudden death of the former director, Akiyoshi Tamaki (former president and chairman of Chiyoda Chemical Engineering & Construction), and he is expected to fulfill the function as the doyen of doyens in the industry following in the footsteps of the departed Tamaki. The plant industry of Japan has played an important role as the supplier of strategic export commodities in international economic society, and its contribution in the future is expected to be equally significant. Director Suzuki, who comments that in the 30 years since the war "the plant engineering industry of Japan has grown to be a college student," was asked his views regarding the present state and future outlook of the plant industry, which has now reached a turning point.

No Need To Worry About Cooperative Operation

Matsuda: "Can you tell us your thoughts and aspirations as new director of the Engineering Promotion Association?"

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Suzuki: "The Engineering Promotion Association was established in August 1978, which means it is fully 3 years old. Although it is a foundation, there are more than 100 companies contributing as patron members, and operational activities appear to be on the rise. Since its start, the growth of the association has been nourished by the guidance of MITI, the zeal of the member companies and the effort of the late director Tamaki. I do not worry about the operation of the association because it is fully staffed with, to begin with, Chairman Yoshihiro Inayana (chairman of the Federation of Economic Organizations), executive directors and executive office staff. For FY-81, in particular, I do not need to worry, since the business plan has already been completed and approved. My real tasks are from next year on.

Matsuda: The plant industry is at the dawn of a transitional period. What do you think is the role of the association director?

Japan-U.S.-Europe Meeting

Suzuki: Members of the association are not limited to companies specializing in plant engineering but are from all sorts of fields--iron and steel, electric machines and construction. With all these strengths put together, I hope to accomplish a great deal. On the other hand, it is also very difficult to achieve a consensus of opinion. Major operations that constitute the backbone of the association's activities are: 1) cultivation of human resources, 2) promotion of engineering standardization, 3) project management techniques, 4) establishment of the engineering fee, and 5) research and development of new fields such as social development and resource development. Our future task is "to explore the possibility for development of international operations," as well as to strengthen the international competitive power of Japan's plant engineering industry.

Matsuda: What is the specific content of internationalization?

Suzuki: In September, a Japan-U.S.-Europe joint meeting for project management will be held. We would like to investigate whether it is possible to exchange opinions and data with the European nations and America through meetings such as this. The opening of an "International Engineering Symposium" is scheduled for November as the first such program. Also, at the "81 Chemical Plant Show" to be held toward the end of September, an "International Forum" will be held. We haven't made up our minds yet as to how to promote international exchanges, but we are completing the steps to be formulated for turning the wheels of international operations.

Matsuda: What are you going to do to strengthen international competitive power?

Suzuki: International competitive power can be, I suppose, translated as the improvement of productivity. Every company in this industry is working hard to achieve results, but we want to examine what we can do as an association confronting the difficult period for the plant industry anticipated this year and next year. Japan's plant engineering industry has grown to be a college student in terms of child rearing. It is slightly behind the automobile and electronics industries, but has grown promisingly enough to stand shoulder to shoulder with the world's top levels. For example, speaking of the soft technology of engineering,

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we are confident that we rank comfortably high, although compared to the world's top class plant companies such as Bechtel and Floor [phonetic] of America, there is still a considerable gap in overall power. Particularly, the three companies specializing in plant engineering have fully reached the world's level.

Matsuda: I hear that international cooperation regarding plant exports, for instance, forming of an international consortium, is in progress....

Suzuki: True, the number of consortiums is increasing, and international procurement of plant machinery and equipment is also active. The Japan Machinery Exporters' Association functions as a service window and is promoting cooperation in plant exports to Third World nations with European nations and Korea. In Europe, a lot is expected from Japan's plant industry. On the other hand, cooperation among Japanese companies themselves is an important theme, along with international cooperation. Regarding the procurement of machinery and equipment, we are in trouble unless Japanese makers supply us with inexpensive machinery and equipment to deal with international procurement. On this point, I feel that we can achieve domestic cooperation if we work together with the related makers, since there are quite a few members which are known as electric machinery and general heavy machinery makers. Indeed, the plant industry has a difficult side, but it is also an interesting industry from this aspect, which can be called an industry with potential.

Waiting for Recovery of Exports

Matsuda: Plant exports went below the \$10 billion mark last year. What about the future prospects?

Suzuki: Many things happened last year--the Iran-Iraq war and problems related to China. However, projects started from the beginning of this year, attributable to the completion of the reviewing of economic plans in countries such as Algeria, Indonesia and Malaysia. Big projects are surfacing in Saudi Arabia and Venezuela. Based on all indications, I expect a recovery, but I don't know how big, although some people forecast that exports will recover up to the "\$15 billion level."

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